BRITISH DESTROYERS 1939–45

Wartime-built classes

ANGUS KONSTAM

ILLUSTRATED BY TONY BRYAN

NEW VANGUARD 253

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BRITISH DESTROYERS 1939–45

Wartime-built classes

INTRODUCTION

Between the two world wars, Britain built destroyers developed from the successful designs it produced during World War I. These were all medium-sized general-purpose destroyers, and each new class was an evolutionary refinement of the previous one. This course was encouraged by government parsimony and a reliance on the naval status quo being maintained through naval treaties. Once Britain had led the world in destroyer design, but it was now resting on its laurels.

In the mid-1930s the British Admiralty was forced to accept that its destroyer designs were now inferior to some of those being built by its potential foreign rivals. Its solution was to design and build the first of a new breed of destroyer – warships that represented a clear break with the past.

These became the Tribal class, destroyers built specifically to counter the threat posed by the large gun-armed destroyers in foreign service. Following this, the Admiralty resumed the building of medium destroyers, albeit ones of a modern design. Further classes were planned, but the imminence of war forced another rethink. This resulted in the War Emergency Programme, a mass production of speedily produced destroyers which might lack the performance of preceding classes, but which could be built quickly, and in large numbers. As destroyer losses mounted, these new vessels came to form the bulk of Britain’s destroyer fleet.

While the book is subtitled ‘Wartime-built classes’ (the previous volume covering ‘Pre-war classes’), the real division came in 1938, when the first of the Tribals entered service. They were such a departure from their inter-war predecessors that this second volume begins with them, and traces the development of these destroyers and those that followed them, whether built shortly before hostilities began, or during the war itself. The result, I hope, is a broad picture of a type of ship that proved vital to Britain’s ultimate victory at sea during World War II.

DESTROYER DESIGN

When World War I ended, the Royal Navy operated a powerful fleet of destroyers, so there was no need to build more. The immediate post-war years were also a time of disarmament, and international naval treaties limited the size of destroyer fleets. Then, from 1928 a shipbuilding programme began, under which older destroyer flotillas would gradually be replaced by new ones. These inter-war ships were medium-sized, general-purpose destroyers, all conforming to the same general design. Each though, tended to be an improvement on the previous batch, with each class following in alphabetic order, from A to I. Nevertheless, by the time the first G-, H- & I-class destroyers were laid down in 1934, it was clear that the Royal Navy was being outclassed. What followed was an attempt to remedy that situation.

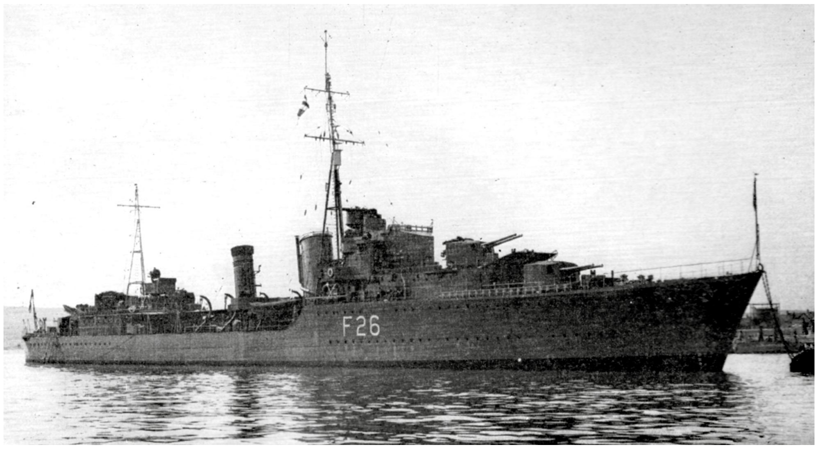
The Gun Destroyers

In 1928, the Japanese commissioned the IJNS *Fubuki*, a 1,750-ton destroyer armed with six 5in guns and three triple 24in torpedo launchers. By 1933 the Japanese had 24 of the Fubuki and similar Akatsuki classes in service. The Admiralty largely ignored this development until then, when reports from the commander of Britain’s China Fleet highlighted the discrepancy in firepower between his own destroyers and these new Japanese ones. As a result, the Admiralty ordered the Director of Naval Construction (DNC) to produce designs for a new gun-heavy destroyer. It was referred to as a ‘V leader’, as it was the size of a flotilla leader, even though no flotilla leaders were ever designated for this new class.

The Admiralty issued its ‘Staff Requirements’ to the DNC, who in turn canvassed the seagoing fleet commanders, and consulted his own sub-departments, who dealt with specifics such as weaponry, engineering and electrics. By late 1934 the design was taking shape, and various plans were submitted to the Admiralty. It was decided to opt for four or five twin 4.7in turrets, even though the turret itself was not fully developed. These were low-angle (LA) guns, which lacked the ability to engage enemy aircraft effectively. This, though, was inevitable, as in the mid-1930s the Navy lacked an effective dual-purpose (DP) gun, capable of engaging both surface and airborne targets. Final designs for an eight-gun destroyer were approved that winter, and an initial group of seven ships were funded in the 1935–36 naval estimates.

The advent of the Tribal class represented an attempt by the Admiralty to counter the more heavily armed destroyers then being built by other navies. The result was a large and powerful gun-armed destroyer, but one with a very limited torpedo capability.

The plan was to deploy these in two three-ship divisions, with a seventh destroyer acting as a flotilla leader. As a consequence of Japan’s rejection of naval treaty limitations, the numbers were increased slightly to two eight-destroyer flotillas, the second batch of nine ships being ordered in 1936–37. All of these were ordered in addition to the regular annual flotilla building programme, as they were seen as a special case – destroyers earmarked to support other flotillas, with the firepower needed to destroy any enemy destroyer or light cruiser sent against them. As such they were initially dubbed ‘Support Destroyers’, although by the summer of 1936, when the first of them were laid down, they were given the collective title of the Tribal class.



The Tribal-class destroyer HMS *Matabele*, as she appeared in early 1939, when she joined the Home Fleet. She remained in northern waters throughout her brief career, until she was torpedoed and sunk off the Kola Inlet in January 1942. There were only two survivors.

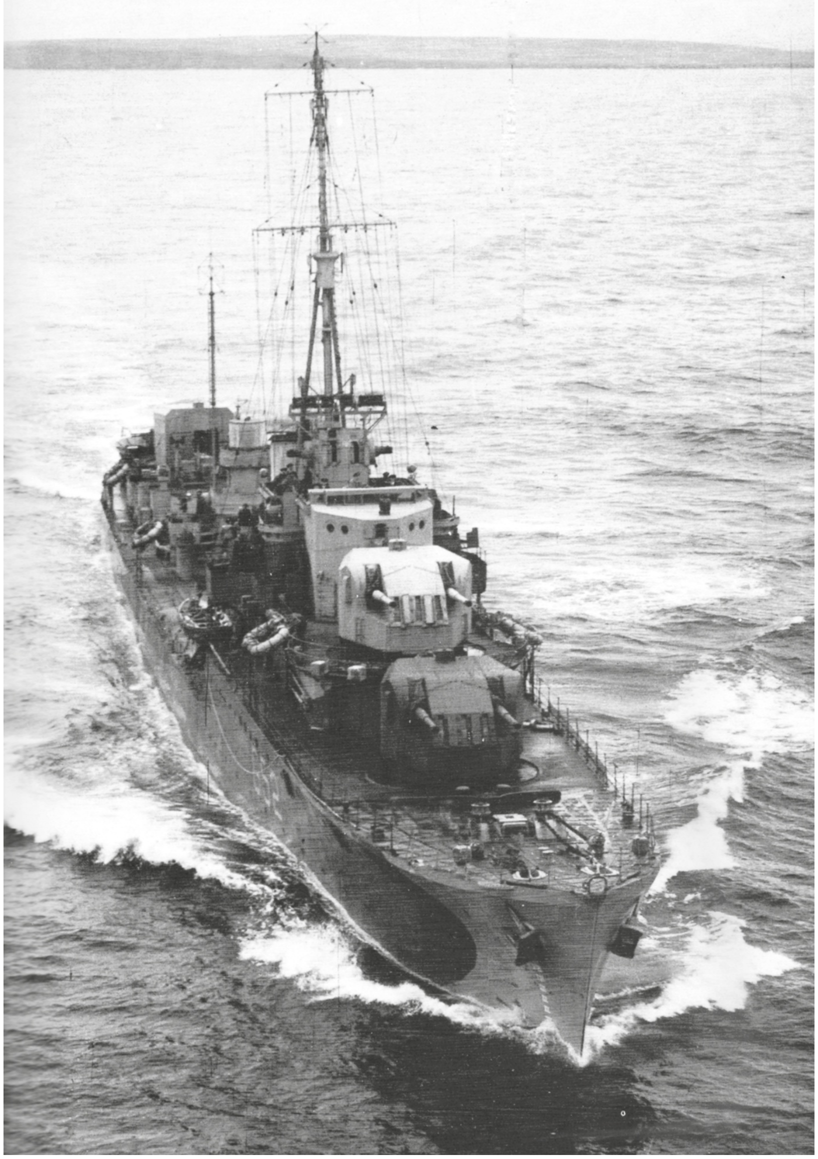
When the initial designs had been sent to all the fleet commanders for comment, most had welcomed the introduction of twin gun turrets, and suggested these could be used to enhance the firepower of their fleet destroyers. At the same time the DNC was working on the successors to the G-, H- & I-class destroyers, which were laid down between 1934 and 1936. Again, the 4.7in gun was the only acceptable choice, despite its inability to protect a ship from air attack. In the mid-1930s the extent of the threat posed by modern dive-bombers was not fully understood. If it had been, a greater emphasis might have been placed on the development of an effective dual-purpose gun.

The gun issue aside, the Admiralty still had to decide what kind of destroyer it wanted. The Tribals were regarded as unique, and clearly a smaller destroyer was required. However, would the emphasis be on guns, torpedoes, anti-submarine warfare (ASW), or an amalgam of these? Britain was negotiating the London Naval Treaty (1936) at the time, and so political considerations advised a return to a general-purpose medium destroyer design, while treaty-imposed displacement limits also made the unwelcome return of single gun mountings politically expedient.

So, the Admiralty’s Staff Requirements called for a low-silhouetted medium destroyer, fitted with Asdic and depth charges, a main armament of 4.7in guns in four single mounts, and eight torpedoes in two quadruple launchers. Despite the will to return to single mountings, the eventual solution was a design with three open-backed twin turrets, two forward and one aft, with the torpedoes mounted amidships. To achieve this within the 1,700-ton treaty displacement limit of a medium destroyer meant a reconfiguration of the propulsion system. Fortunately recent developments in boiler technology permitted this, and in the summer of 1936 various designs were considered. The successful one, developed by the veteran naval architect A.P. Cole, was approved in November 1936, despite criticism that it involved an increase in destroyer size and displacement.

Calls for a single eight-ship flotilla to allow this new design to be evaluated were overtaken by the looming prospect of war, and so two flotillas were ordered, becoming the J and K batches of the class. When they first entered service in early 1939 these destroyers exceeded the Admiralty’s expectations in terms of performance. Consequently a third flotilla was ordered, becoming the N batch of the class, as the letters L & M had already been allocated. During 1937 a new design for a medium destroyer was developed, similar to the previous batch, but with fully enclosed and weatherproof twin turrets. Also, the DNC's ordnance department was ordered to ensure that the 'X' gun was capable of training a full 360 degrees – those of the J, K & Ns could not fire directly aft. Despite the lifting of treaty limitations, calls for larger destroyers were rejected by fleet commanders – what the Navy needed, they argued, were medium-sized fleet destroyers, and lots of them.

The result was the L & M class, which were slightly larger than their predecessors, and significantly heavier, thanks largely to a new design of gunnery director control tower (DCT), which was the first in service to combine low-angle and high-angle (LA/HA) fire control. This was deemed necessary as new gun mounts permitted an increase of main armament elevation to 50 degrees. While this was still of little use against enemy dive-bombers, at least it represented an incremental improvement. The result was a ship with a greatly increased top-weight, which in turn slightly reduced its seaworthiness. Still, the powerful gun and torpedo armament proved invaluable. These ships were also luckier than many of their predecessors – by the time they were fitting out, the lack of anti-aircraft (AA) protection in British destroyers had been exposed, and so by the time they joined the fleet these shortcomings had been partly overcome.

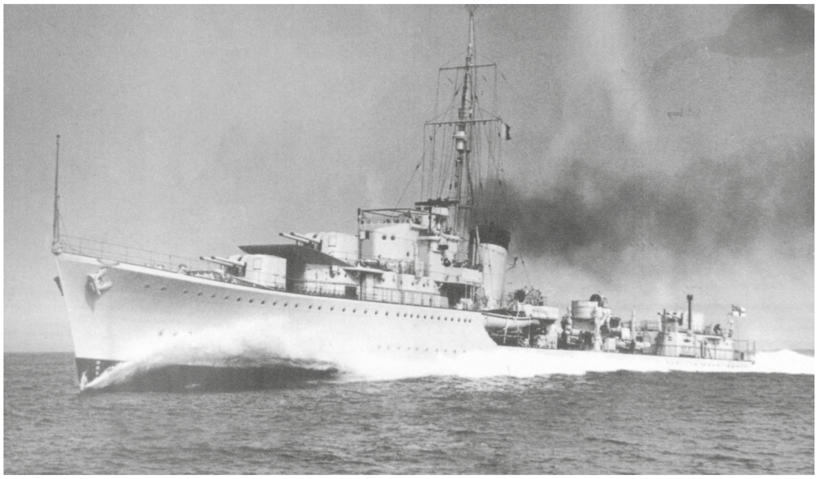


The destroyer HMS *Matchless*, pictured leaving Scapa Flow in August 1943, while serving with the Home Fleet’s 3rd Destroyer Flotilla. She spent most of her wartime career protecting the Arctic convoys, and in December she participated in the sinking of the German battlecruiser *Scharnhorst* at the battle of North Cape.

War Emergency Programme

By late 1938 it was clear that another major war was likely. So, the Admiralty ordered the DNC to draw up a programme for the rapid mass-construction of destroyers. These would be of an intermediate class between the older G, H & I classes and the J & Ks, which were currently being built. The Admiralty reckoned it had enough fleet destroyers either in service or under construction. What it would need would be escort destroyers, albeit ones capable of fulfilling a fleet destroyer role if required. Various options were considered, although the lack of a DP gun limited the DNC’s options, as did the preference for a new and slightly heavier version of the 4.7in gun. Initial designs involving twin turrets were rejected, but in May 1939 a layout with four single gun mounts on a slightly shortened J-class hull was approved. The first of what became the O & P class were laid down the following January.

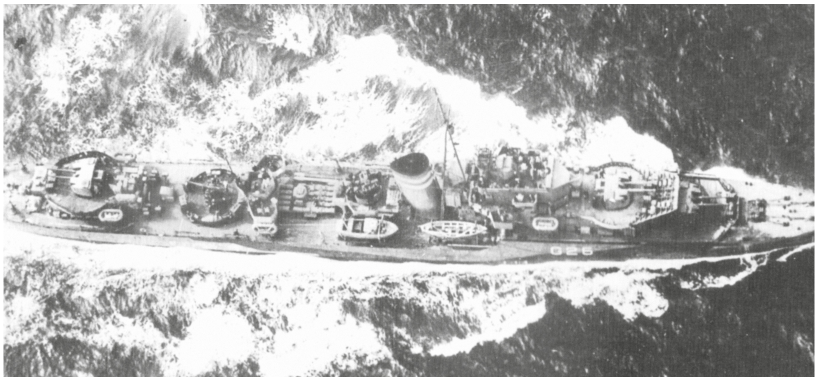
These though, were not truly part of the War Emergency Programme (WEP) destroyers envisaged by the Admiralty. They did not fully reflect expected wartime requirements, or the need for speedy mass production, apart from the reliance on pre-designed hulls. So, a new design was developed during the latter half of 1939 that saw the production of a ‘no frills’ ship, where comfort and habitability as well as incremental improvements in hull design or weaponry were sacrificed on the altar of mass production. By then the first of the J class were in service, and their design proved successful. Consequently, for speed of production it was decided to retain the J-class hull form, with its easily reproduced longitudinal framing. However, the gun layout of the Tribals would be adopted, albeit with single 4.7in mountings, while adequate space would be retained amidships for torpedo launchers, and aft for depth charges.



One of the most famous British destroyers of the war was HMS *Kelly*, the K-class flotilla leader commanded by Lord Mountbatten. She had a brief but eventful career, striking a mine off the Tyne, being torpedoed by a German E-boat off Norway, and finally being bombed and sunk during the evacuation of Crete.

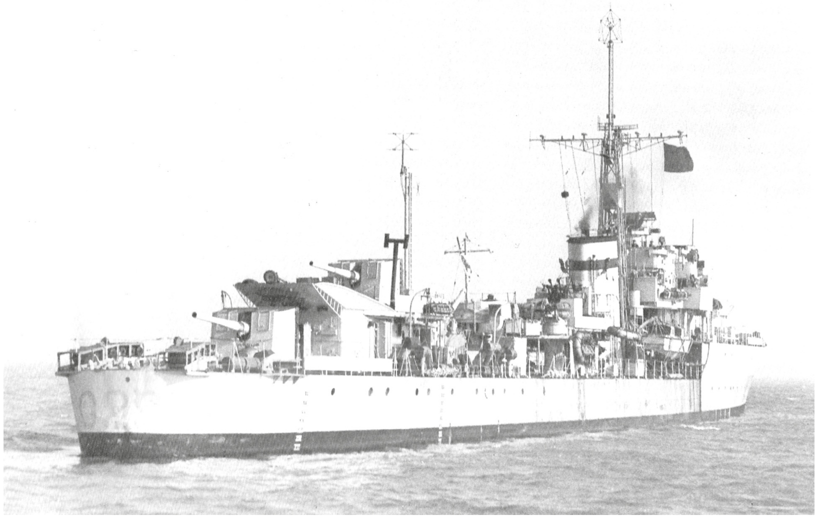
The result was a trimmed-down version of the O & P class, with a slightly longer hull than the original J class. Collectively, these ships were known as ‘War Standard Destroyers’ (WSD). This would set the standard for the rest of the

WEP destroyers, which would be built speedily, and in the quantity envisaged by the Admiralty back in 1938. While there were variants between the various classes of these ‘Emergency Flotilla’ ships, they were small and incremental, at least in terms of design. Instead, what changed dramatically as the war progressed was the provision for fire control, electronics and sensors in each new batch of ships. By war’s end, these mass-produced destroyers had evolved into powerful little warships, largely thanks to their ability to direct their fire with great speed and accuracy.



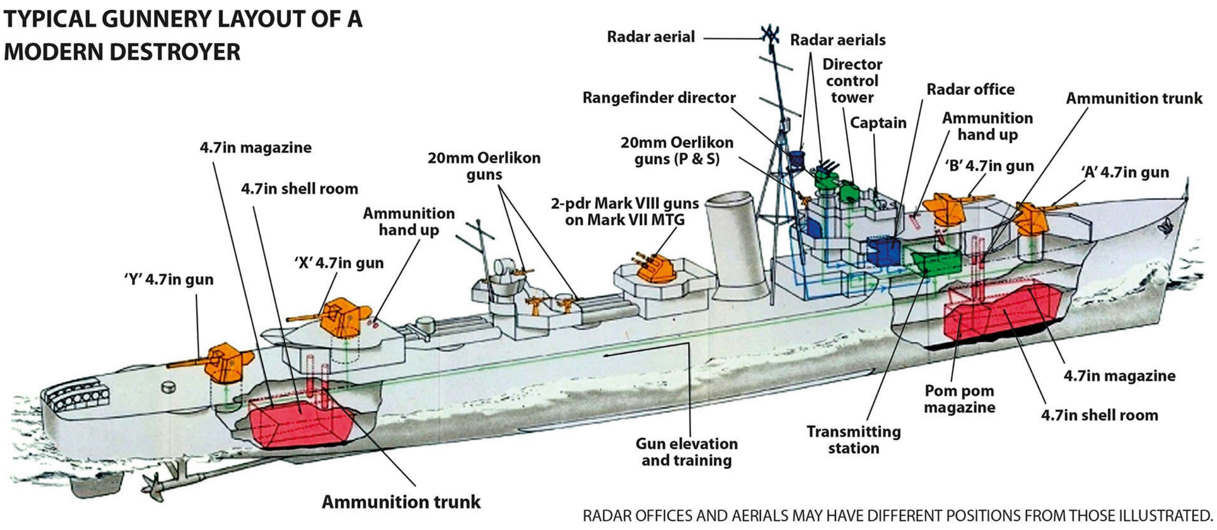
Although HMS *Nepal* served in the Royal Australian Navy, this photograph of her in the summer of 1942 is worth including as it affords a clear view of the upper deck configuration of a J-, K- & N-class destroyer. It highlights the limited field of fire of the 4in AA gun, mounted in lieu of the after torpedo tube launcher in all ships of the class.

By 1942 the production of these mass-produced ships was well under way, and the first of them had entered service. This was a crucial year for the Navy: destroyer losses reached their peak, as just over 50 destroyers and destroyer escorts were sunk or rendered constructive losses. So, satisfied that replacements were available, the Admiralty was able to consider the production of a more advanced design. By then the lack of a suitable dual-purpose gun had been addressed. Early in the war the 4.5in gun had been developed as a secondary weapon for capital ships, but by now it had been adapted into a true DP weapon. So, in March 1942 the Admiralty adopted the weapon as its new destroyer gun – one capable of elevating to 80 degrees, while also having the range and hitting power of its 4.7in predecessor. Now it had a gun, it needed a ship to carry it.



The O-class destroyer HMS *Offa*, photographed in Scapa Flow during the spring of 1945, during a brief interlude in her service in defence of the Arctic convoys. At this stage of the war she is well provided with radar, carrying a ‘cheese-shaped’ Type 293 (search) radar in her foremast, and the ‘X-shaped’ Type 291 (air warning) radar in her mainmast.

Fortunately the DNC had already drawn up plans for a new version of the six-gun destroyer, mounting three twin turrets. The designs had been submitted during the summer of 1941, albeit for vessels armed with 4.7in guns. These envisaged a large destroyer of 2,250 tons, with the hull being an amalgam of the War Standard and Tribal-class designs. By the autumn these plans had been altered, so now the only main guns were in two twin turrets forward – the after deck was given over to anti-aircraft (AA) weapons. The main guns were capable of being fired under full radar control using a Type 275 against both surface and air targets, while AA fire was coordinated using the Flyplane analogue AA computer. These designs were duly approved, and the first ships of the Battle class were laid down the following year. This would be the last destroyer design of the war, a modern warship designed to fight a modern naval war.


TYPICAL GUNNERY LAYOUT OF A MODERN DESTROYER
Radar aerial
Radar aerials
Director control tower
Radar office
Ammunition trunk
Rangefinder director
Captain
Ammunition hand up
4.7in magazine
20mm Oerlikon guns (P & S)
'B' 4.7in gun
'A' 4.7in gun
20mm Oerlikon guns
4.7in shell room
Ammunition hand up
2-pdr Mark VIII guns on Mark VII MTG
'X' 4.7in gun
'Y' 4.7in gun
4.7in magazine
Pom pom magazine
4.7in shell room
Transmitting station
Gun elevation and training
Ammunition trunk
RADAR OFFICES AND AERIALS MAY HAVE DIFFERENT POSITIONS FROM THOSE ILLUSTRATED.

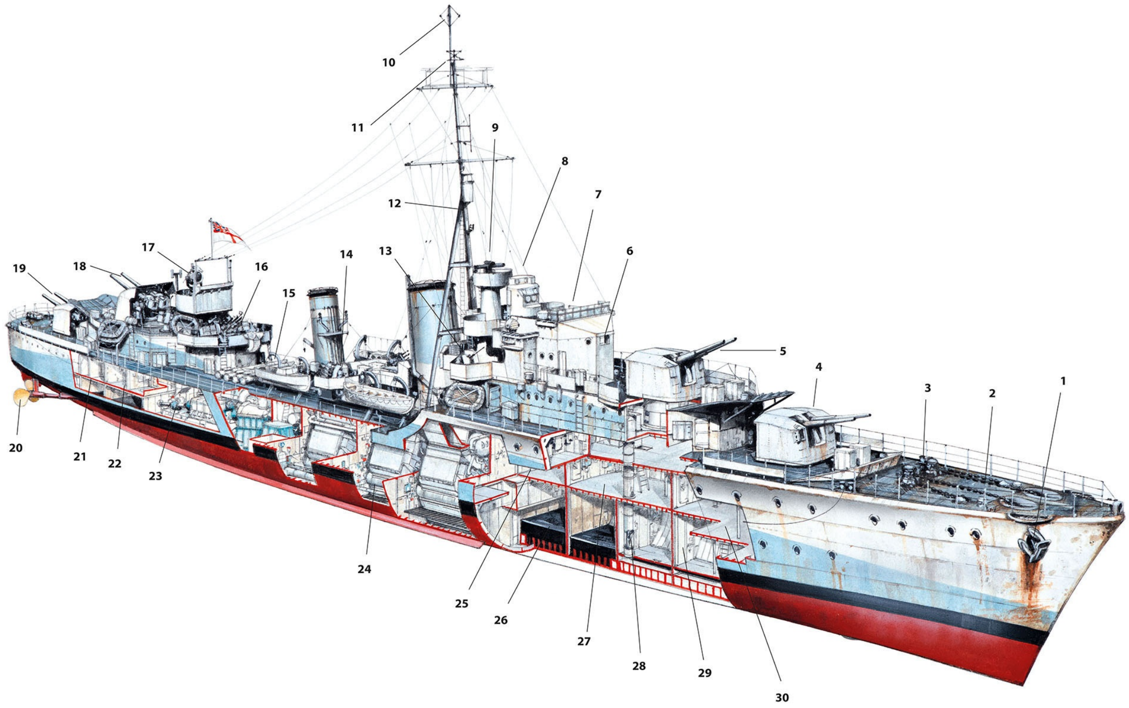
This wartime illustration is excellent at highlighting the weaponry of a Wartime Emergency Programme destroyer, from O class onwards. It highlights the relationship between the main and AA armament (orange), and also the ship's fire control system (green), ammunition supply (red), and radar (blue).

A HMS *ESKIMO* (G75, FORMERLY F75), 1942

When the war began, *Eskimo* was serving in the Home Fleet. In April 1940 she saw action during the second battle of Narvik. Her bows were blown off by a German torpedo, but she survived, and was repaired. She rejoined the fleet in September bearing the new pennant number G75, and she subsequently took part in the defence of four Arctic convoys. Next she took part in Operation *Pedestal* (the hard-fought Malta convoy). She resumed Arctic convoy duties that autumn, before being sent south again to support the Allied landings in French North Africa. She remained in the Mediterranean until July 1943, when heavy bomb damage forced her to return home for repairs. She saw further action in the English Channel during 1944, before being sent out to join the British Pacific Fleet.

HMS *Eskimo*	
Pennant Number	G75 (Originally L75, then F75)
Builder	Vickers Armstrongs, Tyneside
Commissioned	30 December, 1938
Fate	Scrapped, 1949
Displacement	1,854 tons (1,883 tonnes) (standard)

Length	377ft (114.9m) overall, 364 feet 8in (111.1m) waterline
Beam	36ft 6in (11.12m)
Draught	9 feet (2.75m) mean
Propulsion	Three Admiralty 3-drum boilers, two Parsons geared turbines, two propeller shafts, generating 44,000shp
Maximum speed	36 knots
Fuel oil capacity	524 tons (532 tonnes)
Range	5,700nm at 15 knots
Armament (1942)	Six 4.7in QF Mark XII guns in three twin mounts (‘A’, ‘B’ and ‘Y’ turrets), Two 4in Mark XIX HA guns in one twin mount (‘X’ turret), One quadruple-barrelled 2-pdr pom-pom Two quadruple-barrelled 0.5in Mark III machine guns Four single 20mm Oerlikon AA guns Four 21in torpedo tubes, in one quadruple launcher
Complement	190 men



KEY	
1.	Main anchor (one of two)

2.	‘Focsle’
3.	Anchor windlass (one of two)
4.	‘A’ gun (twin 4.7in QF gun Mark XII)
5.	‘B’ gun (twin 4.7in QF gun Mark XII)
6.	Wheelhouse
7.	Bridge
8.	Director Control Tower (DCT). Her Type 285 fire control radar was added later in 1942.
9.	Main Gun Rangefinder. The port and starboard Vickers AA Predictors were mounted below it.
10.	Type 286 surface search radar antenna
11.	Type 291 air warning radar antenna
12.	Foremast (and Lookout Station). IFF interrogators are mounted on her lower yard.
13.	Forward single 20mm Oerlikon mount (one of two)
14.	Forward quadruple 0.5in machine-gun mount (one of two)
16.	Quadruple 2-pdr pom-pom Mark VII mount. The two after single 20mm Oerlikon mounts were fitted behind this mount, on either side of the searchlight platform.
17.	Searchlight platform (and after steering position), surmounted by HF/DF antenna frame and ensign staff.
18.	‘X’ mount (twin 4in AA gun Mark XIX)
19.	‘Y’ mount (twin 4.7in QF gun Mark XII). Depth charge racks are carried astern of the mount, on the quarterdeck.
20.	Propeller screw and shaft (one of two), with single rudder astern
21.	Officers’ cabins
22.	Wardroom
23.	Starboard engine room, housing a Parsons Geared Turbine, with reduction gear astern of them. The port engine room was similarly arranged.
24.	Boiler Room (one of three), housing an Admiralty 3-Drum Boiler and feed water tanks, with funnel uptake vents above them.
25.	Action Information Centre (AIC)
26.	Fuel Tank (one of four - two per side)
27.	Seamens’ Messdeck
28.	‘B’ mount Magazine (one of two compartments)
29.	‘A’ mount magazine (one of two compartments)

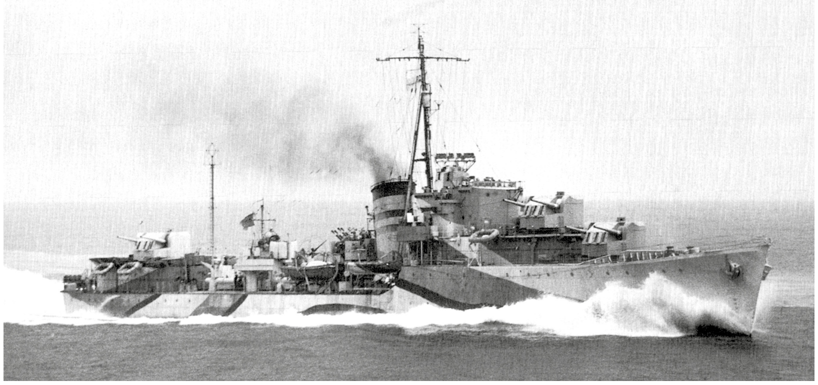
30.	Seamen’s Messdeck, with Senior Rates’ Mess forward of it

DESTROYER FUNCTION

Role

In the previous volume (NVG 246 – *British Destroyers 1939–45: Pre-war classes*), we examined the role of Britain's inter-war and wartime destroyers, and how they were divided into fleet destroyers and escort destroyers. To avoid repetition we will look instead at the roles filled by the more modern destroyers described here.

The most immediately recognizable of these was the role of 'support destroyer', a term coined to describe the function of the heavily gun-armed Tribal class. Their intended purpose was to protect existing fleet destroyers from large gun-armed enemy destroyers or light cruisers. When not performing this role they would operate as fleet destroyers themselves. During the war they fulfilled this role on a number of occasions; off Norway in 1940, in the Mediterranean in 1941–42, and again in the Arctic during 1941–45. However, it proved a largely unnecessary duty, as fleet destroyers rarely operated without cruiser support. Inevitably, the Tribals reverted to their fleet destroyer role, and were generally used as such throughout the war.



HMS *Laforey* spent most of her career in the Mediterranean, and in this photograph taken in the summer of 1943 she was operating as the flotilla leader for the destroyers attached to Force Q, based in Bone, in North Africa. Her three twin 4.7in guns were capable of direction by a Type 286 (fire control) radar.

The War Standard destroyer was originally designed to fulfil a destroyer escort role. However, wartime losses led to the deployment of many of them as fleet destroyers. Sometimes the two roles were combined, as happened during the Arctic campaign, when these vessels provided both close support for Arctic convoys and also formed part of the distant cover force, designed to operate with larger warships to protect these convoys from German sorties. Similarly the J, K & N and L & M classes were designed as fleet destroyers, but through necessity they could be used as escorts when required. Finally the Battle class were designed primarily as AA destroyers, capable of protecting both naval forces and convoys. Essentially the old division of roles never really applied to the Tribals and their successors, as necessity formed by grievous destroyer losses meant they were sent where they were needed most.

Weaponry

Until the very end of the war, the Royal Navy's main destroyer gun was the 4.7in QF gun. Most of the ships described here carried one of three versions of this weapon – the Mark IX, used in the War Standard destroyers of the O to W classes, the Mark XI of the L & M class, and the Mark XII of the Tribals and the J, K & N class. These last two marks were mounted in twin turrets. All but the Mark XI fired a 50lb (22.68kg) projectile, had a muzzle velocity of 2,650fps (808mps), and an effective range of 16,970 yards (15,520m) at 40 degrees elevation. This made them powerful low-angle weapons, and the equivalent of similar 5in guns in other navies. The heavier Mark XI fired a 62lb (28.12kg) shell out to 21,240 yards (19,450m), at a muzzle velocity of 2,535fps (774mps). With a firing cycle of 5–6 seconds, an impressive rate of fire of up to 8–10 rounds per minute could be achieved.

The 4.5in QF Mark IV gun was the Navy's replacement for the 4.7in, and a gun capable of effective AA fire. It was mounted in the Z & Ca classes, while the rest of the C class and the Battle class, plus *Savage* carried a Mark III version. Both versions fired the same 55lb (24.95kg) shell, with a maximum horizontal range of 20,750 yards (18,970m) at 45 degrees' elevation, or a ceiling of 41,000ft (12,500m) at 80 degrees. The marks differed only in their suitability to fit different gun mountings. This gun matched the 4.7in for rate of fire, but was capable of semi-automated fire, under radar, director or local control. Its predecessor was the 4in HA Mark XVI, which fired a lighter 35lb (15.88kg) shell. These were carried in a twin mounting; the single 4in AA gun carried in most Tribals had a similar performance, but was operated under limited fire control or local control only.

These 4.7in QF Mark XII guns in their twin Mark CPXIX power mounting formed part of the main armament of a Tribal-class destroyer. Each pair of mountings was powered by a combination of a steam turbine and a hydraulic pump, which trained the guns at the rate of 10 degrees per second.

The AA weaponry fitted in most of these destroyers has already been described in the earlier volume. To recap, although the quadruple 0.5in machine gun lacked range or stopping power, the quadruple 2-pdr ‘pom-pom’ was a more effective weapon. It had a maximum ceiling of 13,000ft (3,960m), and a rate of fire of around 100 rounds per minute. While the 20mm Oerlikon had a less impressive range, it proved accurate and effective, particularly when its single mounting was replaced by the heavier twin Mark V mount. Before the arrival of the Oerlikon, some Tribals even carried obsolete Lewis guns to augment their close-range firepower.

A quadruple 2-pdr pom-pom AA mounting, sited in front of the after steering position on a British wartime destroyer. This posed photograph was produced to commemorate a visit to the ship by female munition workers, who produced the shells which this gun used to shoot down a German aircraft.

The largest of these close-range AA guns was the 40mm Bofors. On a single ‘Boffin’ mounting it had great stopping power, but in a Hazemeyer twin power-operated Mark IV mount it proved deadly. It had a ceiling of 23,500ft (7,160m), and an impressive muzzle velocity of 2,890fps (881mps). The guns were clip fed, which limited their rate of fire, but the mounting could be trained quickly, and fired with ease using a foot pedal. It proved the most effective close-range AA weapon in the Royal Navy’s arsenal. As for the 21in torpedo, the improved Mark IX remained the standard model issued to British destroyers, which had a range of 15,000 yards (13,700m) at 35 knots. Finally, all of these destroyers carried Mark VII depth charges, released using either stern racks or the Mark II thrower, which had a range of 40 yards (37m).

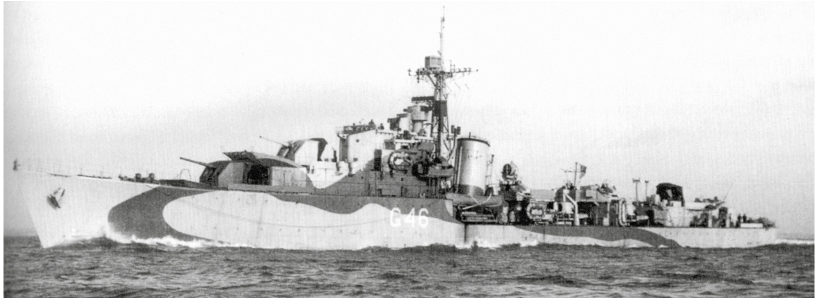
Sensors

Many of the sensors fitted to British destroyers have already been described in the previous volume. Unlike their predecessors though, Asdic and radar were fitted to these wartime vessels before they entered service. Only the Tribals and the earliest of the J, K & Ns had sensors added to them after completion. As well as radar, all these destroyers carried radio direction finders (HF/DF) on their mainmast, to locate the source of enemy radio transmissions. In addition the ‘Headache’ communications intercept sensor was pioneered in *Ashanti* and *Matabele* in 1941. It intercepted radio messages for intelligence-gathering purposes, and was issued in late 1942. Radar emission sensors (RU) were added to these passive sensors in 1945. Finally from 1942, IFF (Identification, Friend or Foe) allowed radar operators to identify enemy contacts more easily, either on the surface or in the air.

As for radar, it acquired the American name only in 1943. Before that, it was officially given the deliberately misleading term Radio Direction Finder (RDF). The first destroyer radar of the war was the Type 286, a ‘search’ or ‘warning’ broad beam (or metric) radar, introduced in 1940. It could detect both air and surface targets, and so gave the ship advanced warning of a possible threat. However, it had a limited detection range of 20 miles for aircraft, and less than half that for surface targets. Also, it was fixed, so initially the whole ship had to turn to detect a target. A rotating version followed in 1941. Later that year the Type 290 was introduced as a replacement for it, but while it had a better coverage, it could detect aircraft only at 15 miles. A better sensor was the Type 291 air warning radar, also introduced in 1941. It could detect approaching aircraft flying at 10,000ft at a range of 35 miles. It replaced the earlier Type 281 air warning set, and was widely used in wartime destroyers.

A gunner kissing his 4in AA shell for good luck before loading it into his 4in Mark V HA gun, on its single Mark III mounting. The gun had a maximum range of 16,430 yards (15,020m), and a ceiling of 31,000ft (9,450m) at 80 degrees' elevation. Beside him a gun captain wearing a headset provides a communication link with the fire control team in the Action Information Centre.

The development of narrow beam (centimetric) naval search radar meant that contact could not only be detected, but it could also be tracked with sufficient accuracy to target it with the ship's guns. The Type 271 and Type 272 surface search or target indication radars introduced during 1941 were accurate enough to detect the periscopes of enemy U-boats at a mile, although they had a limited range of 12 miles for large surface contacts. There was no real difference between the two models, save that the Type 272 was designed to be placed on top of a destroyer's mast.

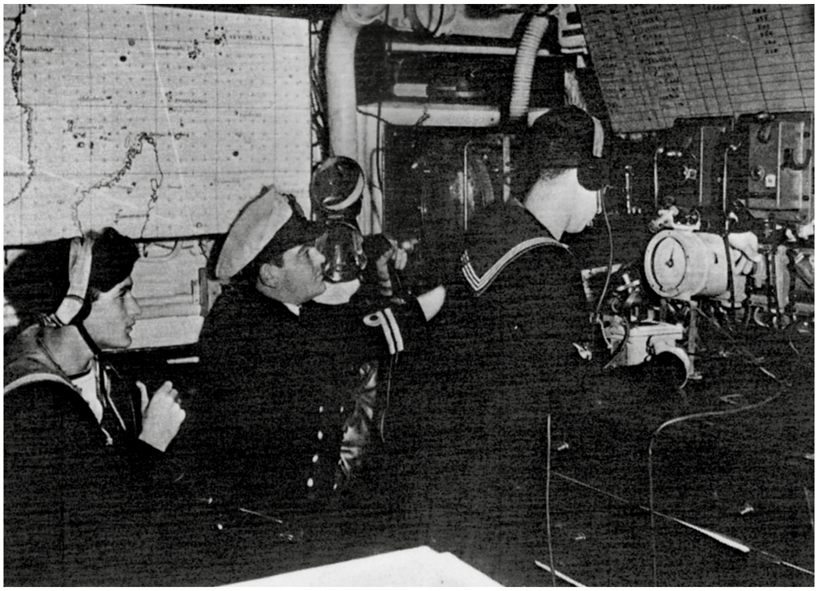


HMS *Swift*'s active career lasted barely four months, from early February until 6 June 1944, when she struck a mine and sank off the Normandy beaches. In this picture of her taken during her 'working up', she carries a Type 272 (surface search) radar on her foremast, in its lantern-shaped housing, together with a Type 291 (air search) at her masthead.

The Type 273 was ostensibly designed for larger ships, but was also fitted to destroyers. Like the Types 271 and 272 it was housed in a plastic lantern-shaped box, and was rotated manually. While it offered no real improvement in detection range, it was far more accurate in terms of producing accurate targeting information. In 1943–44 it was replaced by the more powerful Type 276 set, which had the advantage of automatic full rotation, therefore permitting the use of a PPI (position plan indicator) with its top-down radar display. It also had a slightly greater range than its predecessors. In 1944 it was replaced by the excellent Type 277 surface search radar, which had a range of up to 23 miles, but could also detect aircraft. It also used a PPI display, and an HPI (height plan indicator) for air contacts.

The highly accurate Type 293, which combined air and search radar, was introduced in 1945. It was designed to operate in conjunction with other sets, particularly the Type 277 and the Type 281 or Type 291 air search radars, to produce highly accurate fire control information which was then passed to the ship's guns. While its range was limited to 15 miles for aircraft and large surface contacts, it reflects the late war development of using several radar sets of various beam widths to work together to target a threat. This information was passed to the fire control radars such as the Type 285, which usually sat on top of the gun director, and which provided accurate gun targeting information, at least for surface targets. It automatically tracked targets, and so the guns could seamlessly track a target.

It was replaced by the Type 275, a centimetric fire control radar capable of directing the fire of both HA and LA guns. It was first developed in 1941–42, and various prototypes were tried out in destroyers before it was officially issued in 1945. From 1941 the Type 282 was used to direct close-range pom-pom fire, but it was upgraded to direct the Hazemeyer Bofors. A replacement, the Type 262, was still under development when the war ended. Of course, all these sensors did was to gather information. The key was to use that data to fight the ship effectively.



In one of four wartime propaganda pictures showing the cramped Action Information Centre of the flotilla leader HMS *Saumarez*, the Anti-Submarine Warfare Officer supervises the Interlinking Unit Operator, who co-ordinates information from the sonar, radar and lookouts. On the left a sailor is monitoring the gunnery communications net, while behind them the operational plot shows that their operating area is the western portion of the Indian Ocean.

This was achieved through plotting. A search radar gave the viewer a snapshot of the tactical situation. By recording this information on a plot, the same observer could follow the course of events, and so develop an understanding of a battle as it evolved. While a running plot was not new –before radar it had been done on a chart table – this now involved drawing information from all of a ship's sensors, to build up an accurate tactical picture. This information was collated in the Action Information Centre (AIC), more commonly called the Operations Room (or 'Ops Room'). On most destroyers it was located close to the bridge, often in an extension to the chart house. At the centre of the often cramped Ops Room was the Plotting Table, where the captain or one of his officers could track developments.

In displays arrayed around it, radar and Asdic information was combined with visual sighting reports, as well as internal and external communications links to help build up an accurate tactical picture. The ship could be fought entirely from the Ops Room, although most captains preferred to be on their bridge when the action began, where they could better react to fast-moving events. So, limited plotting and targeting information was passed there too. Similarly, the torpedo officer and gunnery officer were stationed on the bridge and the DCT respectively, where they could actually see the enemy. This was needed if, for instance, a target suddenly changed course, as the radar plotters would not notice the manoeuvre with the same alacrity. Effectively, the way destroyers were fought was changing: whereas once they had been fought from the open bridge, now the Operations Room was becoming the key battle station.

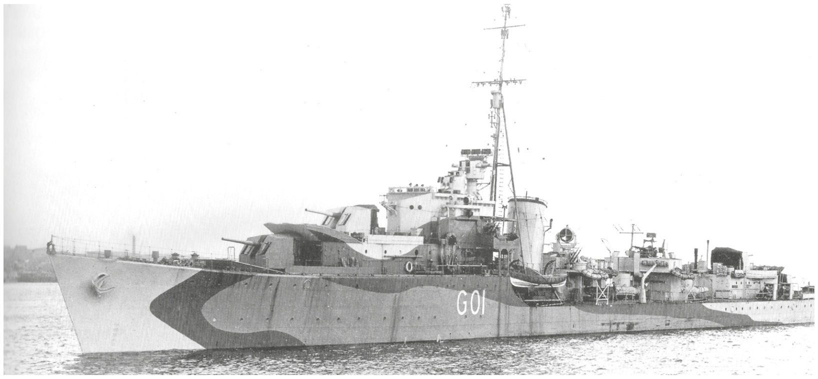
Here the Plotting Officer and his assistant update their tactical plot of the battle area, while behind them the Narrative Writer records and times all events in the course of the engagement. Beside him is the flotilla's Cypher Officer, who monitors and where necessary decodes all radio traffic.

THE DESTROYER CLASSES

Tribal-class destroyers

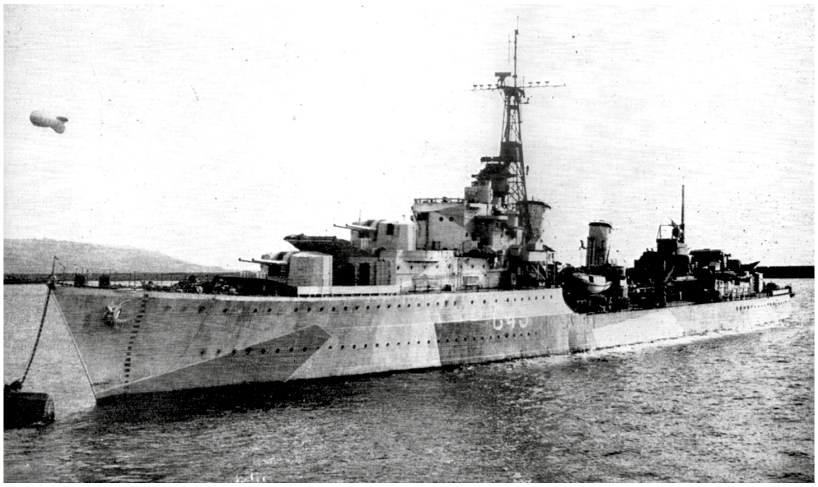
In 1934–35 the DNC produced plans for a large well-armed destroyer, designed to counter the Japanese Fubuki class. Each would carry eight 4.7in guns in four twin mountings, as well as a quadruple 21in torpedo launcher, close-range AA weapons and depth charges. The torpedo launcher was placed amidships, while the four mountings occupied the traditional ‘A, B, X and Y’ positions fore and aft, with ‘B’ and ‘X’ guns superimposed to fire over ‘A’ and ‘Y’ mounts. Powerful though this surface armament was, these guns had a maximum elevation of 40 degrees. Therefore they were of little use in AA defence. Instead, AA protection consisted of two quadruple 0.5in machine-gun mountings, and a quadruple 2-pdr pom-pom, mounted centrally on the after superstructure.

Primarily though, these destroyers were gun platforms, earning the quip that they had been designed by HMS *Excellent*, the Navy’s gunnery school. The only compromise came from the omission of a planned fifth twin gun mounting owing to stability concerns because of the added top-weight. A last-minute suggestion to replace the ‘X’ mount with an eight-barrelled 2-pdr pom-pom was rejected, and so this gun-heavy design was approved and built. As the Japanese Fubuki class carried six 5in guns in three twin turrets, the Tribal class ships were better armed than their Japanese rivals. All ships were fitted with Asdic and carried 30 depth charges (later increased to 46).



HMS *Scourge*, pictured in Scapa Flow in the summer of 1943, while ‘working up’ with the Home Fleet. She spent much of the rest of the year operating in support of the Arctic convoys. While she carries a Type 291 (air search) radar at her masthead, at this stage she lacked the Type 272 (surface search) set issued to most other ships in her class.

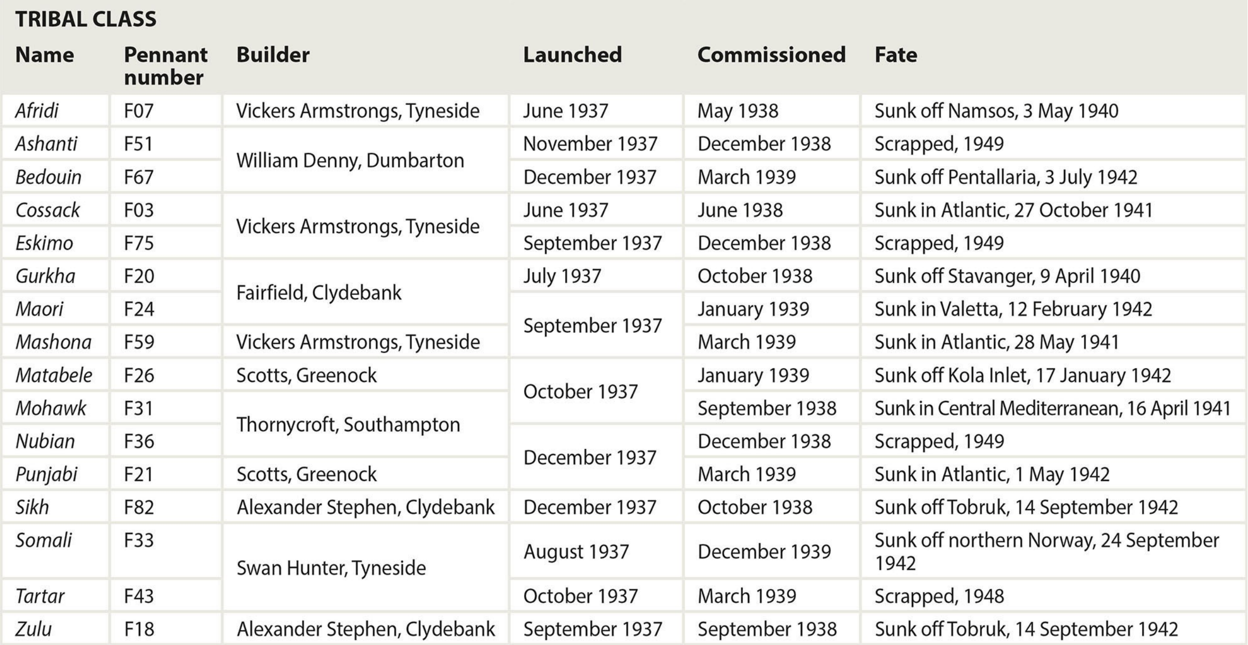
An LA gun director was mounted abaft the bridge, but the rangefinder provided both HA and LA targeting information. A Vickers AA predictor was also fitted, to improve the accuracy of AA fire. This fire though, was still woefully inadequate when fending off modern dive-bombers such as the Ju-87 ‘Stuka’. While a more efficient dual-purpose HA/LA director control tower might have been fitted, weight considerations meant that this less satisfactory compromise was chosen instead. The same rationale led to the rejection of a more resilient engine and boiler configuration, with the boilers spaced out more, and protected by watertight bulkheads. The additional length and displacement this involved was deemed unwarranted.



HMS *Tartar*, pictured lying off Plymouth in early 1944, during preparations for D-Day. She received her new lattice mast that winter, as did the three other surviving Tribal-class destroyers. She carries Type 291 and Type 293 radars in her foremast, and Type 285 atop her gun director.

The 1934–35 naval budget provided for the building of a flotilla of seven destroyers, while a further nine were funded in the following budget cycle. The first batch was ordered in March 1936, and these began to be laid down three months later. By then the second batch had also been ordered, and by the end of the year work was under way on all 16 destroyers. By the outbreak of war all but two of them were in commission. Once in service the hull proved weaker than anticipated, and so the ships were strengthened at their first ‘snagging’ refit.

The Tribals were grouped into two flotillas, the 4th initially attached to the Mediterranean Fleet, and the 6th serving with the Home Fleet. Their gun-heavy armament proved its worth when four of them saw action at the second battle of Narvik (1940). By then, though, their relatively poor AA armament had led to the first loss, HMS *Gurkha*, which succumbed to an air attack off the Norwegian coast. This lack of effective AA protection remained the Achilles heel of the Tribal class until a high-angle (HA) AA gun was installed, in lieu of one of the twin 4.7in mountings.



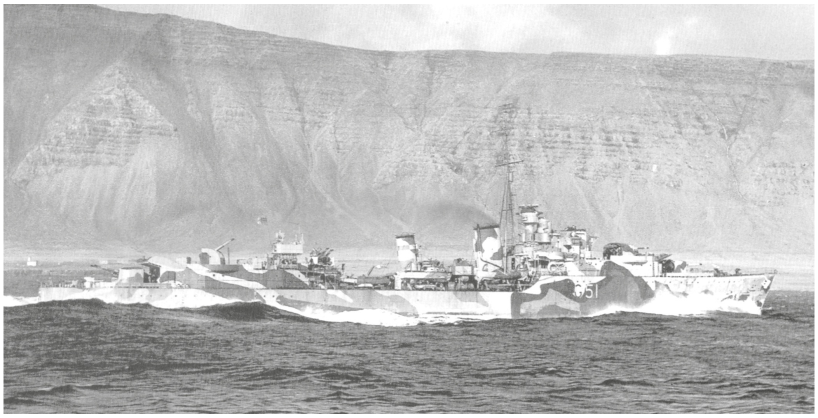
TRIBAL CLASS

Name	Pennant number	Builder	Launched	Commissioned	Fate
Afridi	F07	Vickers Armstrongs, Tyneside	June 1937	May 1938	Sunk off Namsos, 3 May 1940
Ashanti	F51	William Denny, Dumbarton	November 1937	December 1938	Scrapped, 1949
Bedouin	F67		December 1937	March 1939	Sunk off Pentallaria, 3 July 1942
Cossack	F03	Vickers Armstrongs, Tyneside	June 1937	June 1938	Sunk in Atlantic, 27 October 1941
Eskimo	F75		September 1937	December 1938	Scrapped, 1949
Gurkha	F20	Fairfield, Clydebank	July 1937	October 1938	Sunk off Stavanger, 9 April 1940
Maori	F24		September 1937	January 1939	Sunk in Valetta, 12 February 1942
Mashona	F59	Vickers Armstrongs, Tyneside		March 1939	Sunk in Atlantic, 28 May 1941
Matabele	F26	Scotts, Greenock	October 1937	January 1939	Sunk off Kola Inlet, 17 January 1942
Mohawk	F31	Thornycroft, Southampton		September 1938	Sunk in Central Mediterranean, 16 April 1941
Nubian	F36		December 1937	December 1938	Scrapped, 1949
Punjabi	F21	Scotts, Greenock		March 1939	Sunk in Atlantic, 1 May 1942
Sikh	F82	Alexander Stephen, Clydebank	December 1937	October 1938	Sunk off Tobruk, 14 September 1942
Somali	F33	Swan Hunter, Tyneside	August 1937	December 1939	Sunk off northern Norway, 24 September 1942
Tartar	F43		October 1937	March 1939	Scrapped, 1948
Zulu	F18	Alexander Stephen, Clydebank	September 1937	September 1938	Sunk off Tobruk, 14 September 1942

Specifications	
Displacement:	1,854 tons (1,883 tonnes) standard
Dimensions:	Length overall: 377ft (114.9m); beam: 36ft 6in (11.12m); draught: 9ft (2.75m) mean
Propulsion:	Three Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 44,000shp; maximum speed: 36 knots
Capacity:	524 tons (532 tonnes)
Range:	5,700nm at 15 knots
Armament:	Four twin 4.7in QF guns Mark XII, one quadruple 2-pdr pom-pom, two quadruple 0.5in machine guns, four 21in torpedoes in one quadruple launcher
Complement:	190 men (219 in leaders)

Wartime modifications

During 1940–41 a twin 4in AA mounting replaced the twin 4.7in mounting in ‘X’ position. To improve the new guns’ arc of fire the after funnel was shortened, and the mainmast replaced by a short pole mast. At the same time four extra single 20mm Oerlikons were added, mounted on the bridge wings and the after shelter deck. However, shortages meant that *Sikh* and *Zulu* received single 2-pdrs on their bridge wings instead. *Afridi* and *Gurkha* were lost before they could be modified.



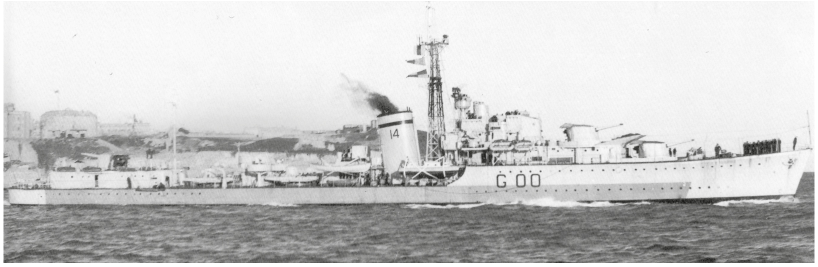
This striking photograph of the Tribal-class destroyer HMS *Ashanti* off the east coast of Iceland was taken in early 1942, while she was operating in support of the Arctic convoys. 'X' gun has been replaced by a twin 4in AA gun, and four Oerlikons have been mounted to bolster her AA capability.

As the war progressed the quadruple machine guns were replaced, first by four single Oerlikons, then later by two twin Oerlikon mountings. In 1944, the four remaining Tribals received a lattice foremast. By this stage the radar suite was a Type 291, a Type 293 and a Type 285. Finally, for service in the Far East, *Nubian* was fitted with a single 40mm Bofors mounted amidships, and four twin power-operated Oerlikons.

J-, K- & N-class destroyers

The Tribal class destroyers were unique, in that they represented an imbalance in favour of the gun over the torpedo, and size over versatility. Afterwards the Admiralty returned to a medium-sized design, with a more rounded capability. Once again the 4.7in LA gun was used as no satisfactory DP gun had been developed. Still, these would be carried in three twin mountings, and the new destroyers would carry two pentad (quintuple) tube torpedo launchers mounted amidships. They were also given the same array of close-range AA weaponry as the Tribals, as well as Asdic, and 45 depth charges.

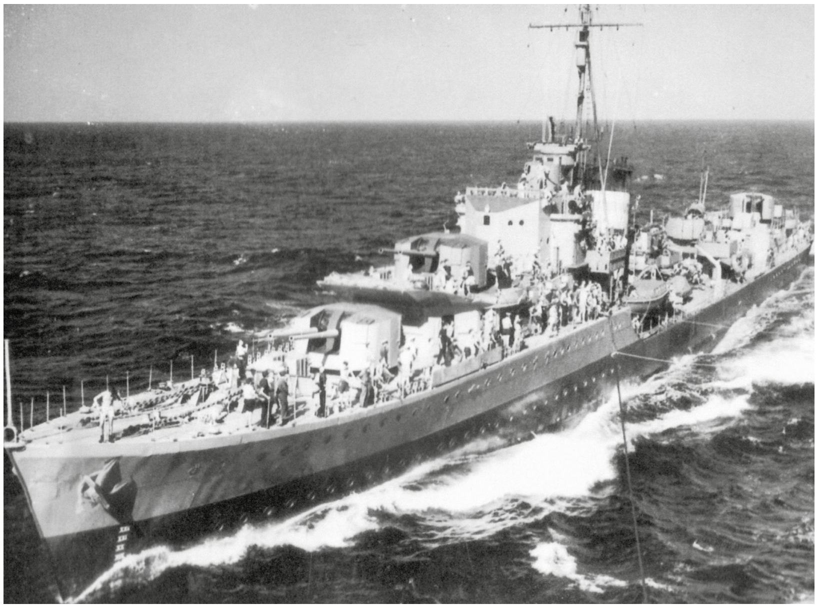
The first batch – the J class – was originally designed to carry four single 4.7in guns. This was considered inadequate, so the design was modified to incorporate three twin mountings, in 'A, B' and 'X' positions. This allowed the designers to reduce the length of the quarterdeck slightly as 'Y' mounting was omitted. The flotilla leaders *Jervis*, *Kelly* and *Napier* were fitted out the same way as the rest of the class.



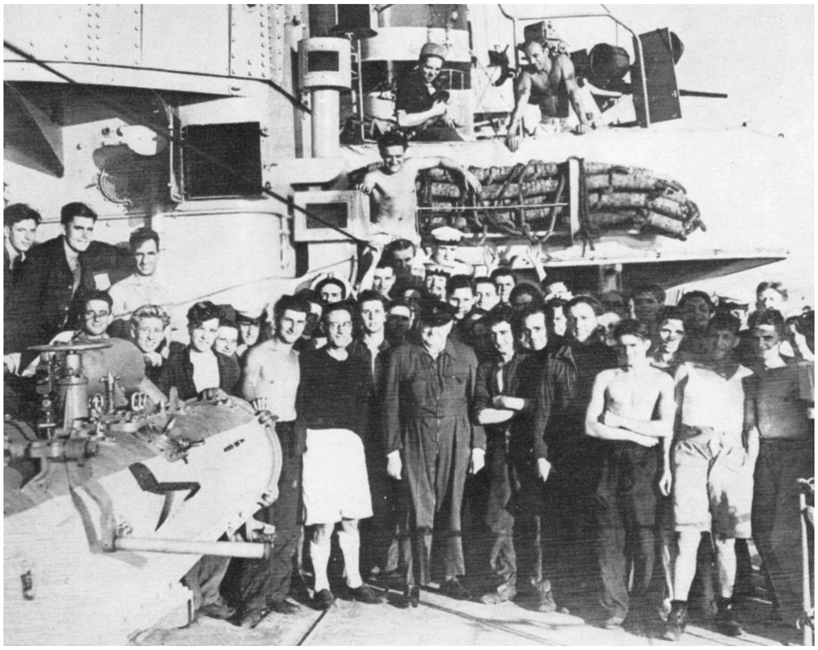
By the end of the war, most surviving J-, K- & N-class destroyers had their 4in AA gun removed, and their after torpedo tube launcher restored. Additional twin and single 20mm Oerlikons were also added in compensation, mounted on her signal decks and searchlight platform respectively. This is HMS *Jervis*, pictured off Malta in 1945.

These ships were fitted with two boilers, rather than the three in older medium destroyers. This was made possible because of improved boiler designs, but it made the ships more vulnerable to damage. Consequently only one funnel was required, making these the first single-funnelled Royal Naval destroyers since the Victorian era. This made these destroyers distinctive, but less obvious was the equally radical way the hulls had been designed, with longitudinal rather than transverse framing.

The first 14 were ordered in the spring of 1937, and work on them began later that year. Two more were ordered before the end of 1938. Finally, the first of a third N-class batch of eight ships were laid down during the summer of 1939. Half of these though, were earmarked for the Royal Australian Navy (RAN). By the time war was declared (3 September 1939) all but one of the J class were in service, as was *Kelly*, the K-class flotilla leader.



Although the Royal and Commonwealth navies had the ability to refuel or transfer stores while at sea throughout the war, the operation was rarely carried out because of the relatively close proximity of friendly bases. In the Pacific, though, these operations became obligatory. Here, the Australian-crewed N-class flotilla leader HMAS *Napier* prepares to carry out a personnel transfer while on route to Okinawa, in 1945.

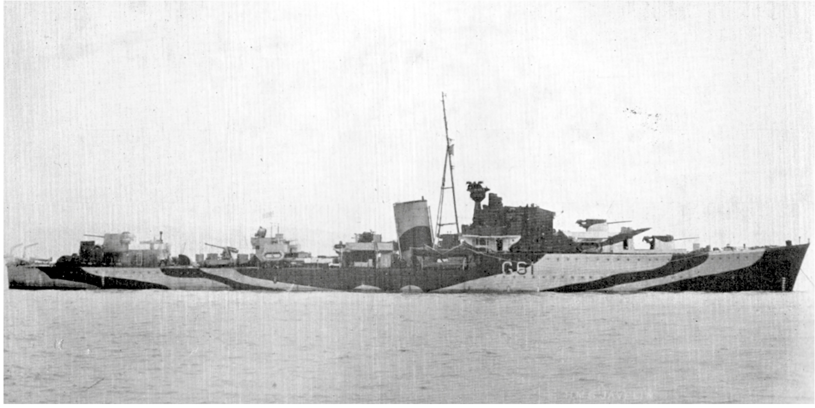


Some of the crew of HMS *Kimberley* pose beside Prime Minister Winston Churchill, during his visit to the ship in August 1944, when it was providing fire support for the Allied landings in the south of France. Despite the presence of their distinguished visitor, the crew 'rig' is as relaxed as it is varied. Churchill appears to have dressed accordingly.

J, K & N CLASS

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Jervis (L)	F00	Hawthorn Leslie, Tyneside	September 1938	August 1939	Scrapped, 1949
Jackal	F22	John Brown, Clydebank	October 1938	April 1939	Sunk in Aegean Sea, 12 May 1942
Jaguar	F34	William Denny, Dumbarton	November 1938	September 1939	Sunk off Sidi Barrani, 26 March 1942
Janus	F53	Swan Hunter, Tyneside		August 1939	Sunk off Anzio, 23 January 1944
Javelin	F61	John Brown, Clydebank	December 1938	June 1939	Scrapped, 1949
Jersey	F72	Samuel White, Cowes	September 1938	April 1939	Sunk in Valetta, 4 May 1941
Juno	F46	Fairfield, Clydebank	December 1938	August 1939	Sunk off Crete, 20 May 1941
Jupiter	F85	Yarrow, Clydebank	October 1938	June 1939	Sunk off Java, 27 February 1942
Kelly (L)	F01	Hawthorn Leslie, Tyneside		August 1939	Sunk off Crete, 23 May 1941
Kandahar	F28	William Denny, Dumbarton	March 1939	October 1939	Sunk off Tripoli, 20 December 1941
Kashmir	F12	Thornycroft, Southampton	April 1939		Sunk off Crete, 23 May 1941
Kelvin	F37	Fairfield, Clydebank	January 1939	November 1939	Scrapped, 1949
Khartoum	F45	Swan Hunter, Tyneside	February 1939		Beached off Perim Island, Red Sea, 23 June 1940
Kimberley	F50	Thornycroft, Southampton	June 1939	December 1939	Sold, 1949
Kingston	F64	Samuel White, Cowes	January 1939	September 1939	Bombed and written off in Malta, 11 April 1942
Kipling	F91	Yarrow, Clydebank		December 1939	Sunk off Mersa Matruh, 11 May 1942
Napier (L)	G97/D13	Fairfield, Clydebank	May 1940	December 1940	Transferred to RAN, 1941
Nepal	G25	Thornycroft, Southampton	December 1941	May 1942	Scrapped, 1956
Nerissa	G65	John Brown, Clydebank	May 1940	November 1940 as ORP *Piorun*	Transferred to Polish Navy on completion, 1940
Nestor	G02	Fairfield, Clydebank	July 1940	February 1941 as HMAS *Nestor*	Transferred to RAN on completion, 1941.
Nizam	G38	John Brown, Clydebank		January 1941 as HMAS *Nizam*	Transferred to RAN on completion, 1941
Noble	G84	William Denny, Dumbarton	April 1941	February 1942 as HNLMS *Van Galen*	Transferred to Dutch Navy on completion, 1942
Nonpareil	G16		May 1941	October 1942 as HNLMS *Tjerk Hiddes*	Transferred to Dutch Navy on completion, 1942
Norman	G49	Thornycroft, Southampton	October 1940	September 1941 as HMAS *Norman*	Transferred to RAN on completion, 1941

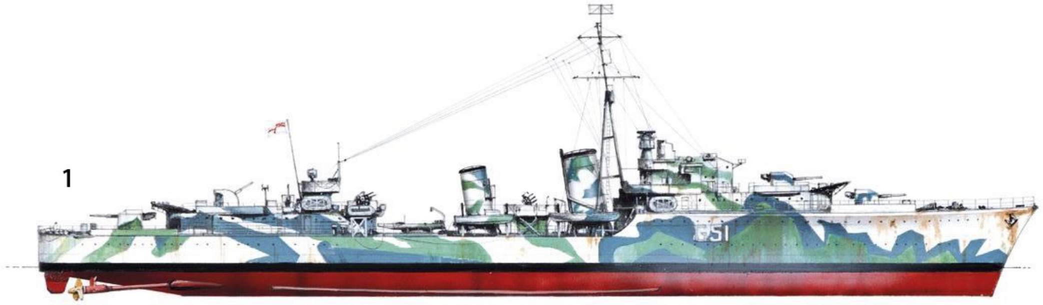
Note: (L) denotes a flotilla leader

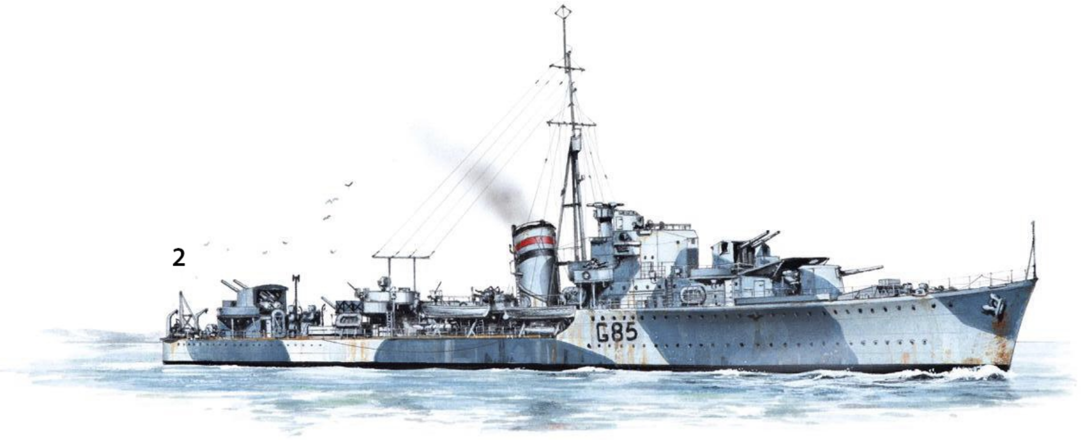


In November 1940, HMS *Javelin* had her bow and stern blown off by German torpedoes. She survived, though, and after a year-long repair she returned to service with the Home Fleet. This is *Javelin* in early 1942, while deployed in support of the Arctic convoys.

Specifications	
Displacement:	1,690 tons (1,717 tonnes) standard
Dimensions:	Length overall: 356ft 6in (108.6m); beam: 35ft 8in (10.8m); draught: 9ft (2.7m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	484 tons (492 tonnes);
Range:	5,500nm at 15 knots
Armament:	Three twin 4.7in QF guns Mark XII, one quadruple 2-pdr pom-pom, two quadruple 0.5in machine guns, ten 21in torpedoes in two pentad launchers
Sensors:	Type 285, Type 286 (N class only)
Complement:	183 men (218 in leaders)

B





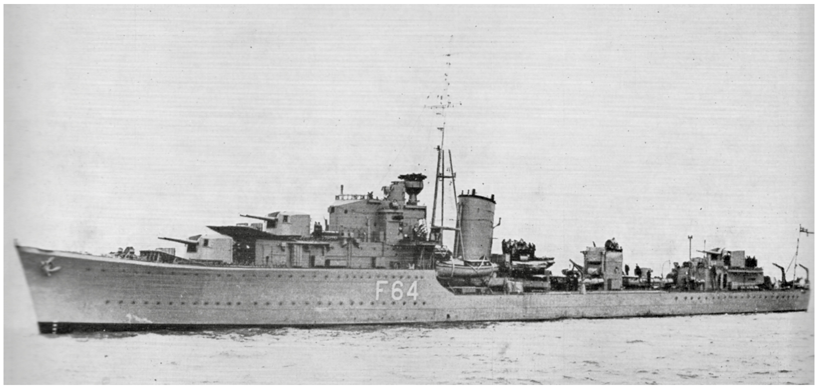
1: HMS *ASHANTI* (F51/G51), 1942
The Chatham-based Tribal-class destroyer *Ashanti* served with the Home Fleet for the first three years of the war, although bomb damage and a grounding kept her in repair for much of the period. This view shows her as she looked during the spring and early summer of 1942, when she formed part of the distant cover for several Arctic convoys, including the ill-fated PQ-17. She carried this colourful disruptive camouflage scheme until August, when she was redeployed to the Mediterranean. The aim of the scheme was to confuse enemy observers, rather than to hide the ship. At this stage of the war *Ashanti* carried a twin 4in gun in her ‘X’ gun position, and six single 20mm Oerlikons in lieu of her original pair of quadruple-barrelled machine guns.

2: HMS *JUPITER* (F85/G85), 1941–42
The J-class destroyers of the 1936 programme which began to enter service shortly before the outbreak of war represented a departure from the largely gun-armed Tribal class that preceded them in that they were primarily torpedo carriers. *Jupiter* spent most of the first year of the war in Humber Force, operating in the North Sea, before being sent first to the Plymouth Command, and then to Gibraltar. After a refit in early 1941 she was deployed with the Home Fleet before being sent to the Far East in November, as part of the ill-fated Force Z. She was sunk during the battle of the Java Sea in February 1942. This shows *Jupiter* as she appeared while serving with Force Z, and then with the American–British–Dutch–

Australian (ABDA) Command during the opening months of the war in the Pacific. By that stage her after torpedo mount had been replaced by a 3in AA gun.

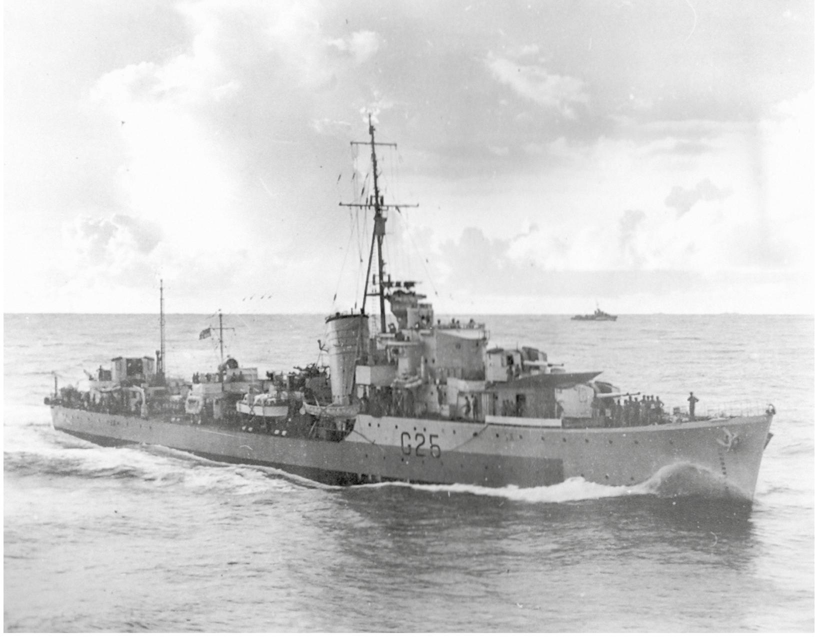
Wartime modifications

During 1941 the ships in service had a single 4in AA gun mounted in place of their after torpedo mounting, and four single 20mm Oerlikons replaced the quadruple machine guns. *Juno* and *Kandahar* retained their after tubes until their loss, while *Khartoum* was lost before any modifications were made.



HMS *Kingston*, as she appeared when she entered service 11 days after the outbreak of war. After service in the North Sea she was sent to the Mediterranean, and in March 1943 she was damaged by a 15in shell, fired by an Italian battleship. She was taken to Malta for repair, but the following month she was sunk during an air raid.

A Type 285 radar was fitted above the DCT, and a Type 286 radar was fitted atop the foremast, although the following year these were replaced by Type 291 sets. The N class ships were fitted out with both radars before entering service, making them the first destroyer class equipped with radar while still fitting out. As the war progressed, surviving ships of the class received additional twin 20mm Oerlikons, including power-operated ones mounted on the bridge wings. In the N class, all but *Norman* entered service with four single Oerlikons instead of her quadruple machine guns. In 1944, *Jervis* and *Javelin* were given lattice masts, mounting a Type 293 radar, and their searchlights were removed.

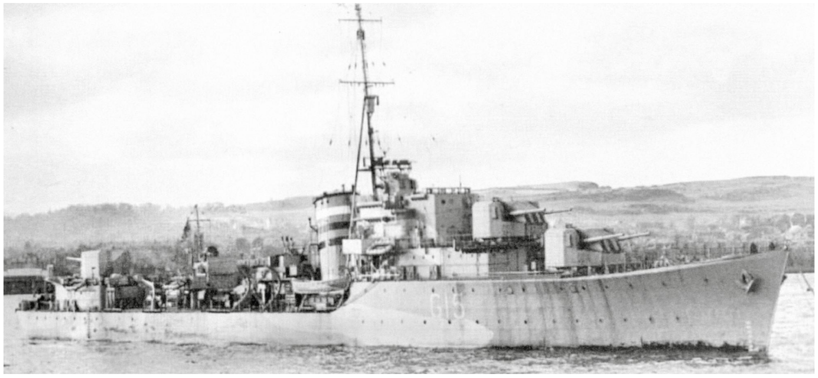


The versatility of the J-, K- & N-class destroyer meant that it retained its usefulness as a fleet destroyer throughout the war. Here, the HMAS *Nizam*, pictured in the Pacific in 1945, shows how her AA armament had been augmented by a single 40mm Bofors in lieu of her searchlight amidships, and power-operated twin 20mm Oerlikons.

L- & M-class destroyers

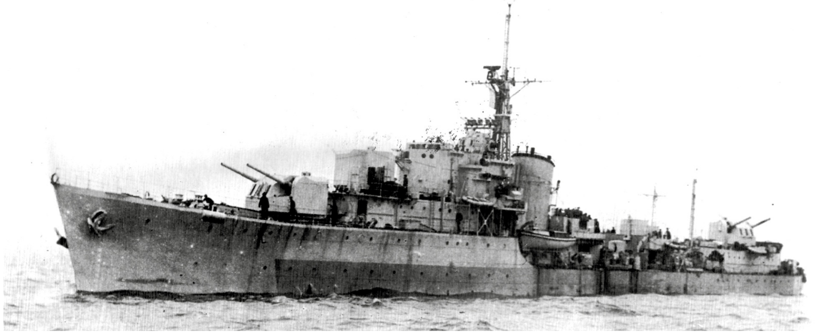
Next, the Admiralty decided to build a batch of slightly modified and enlarged versions of the J, K & N class. The main armament of three twin 4.7in mountings was repeated, and the same close-range AA fit was provided. So, in terms of weaponry rather than size, these two classes were identical to their predecessors apart from their torpedo tubes. The pentad launchers fitted in the preceding class were replaced by quadruple ones, as this reduced top-weight.

Still, there were other small differences. First, the 4.7in gun was a Mark XI, more powerful than earlier versions, and it could elevate to 50 degrees. Their Mark XX mounting was different too. Previous shielded destroyer mountings were open to the elements. These were fully enclosed and weatherproof turrets. However, the turret design was plagued by production problems. So, to speed delivery, four of the eight ships (*Lance*, *Larne / Gurkha*, *Lively* and *Legion*) were completed with four twin 4in QF HA guns instead. As a result, they were dubbed ‘AA Destroyers’. The other four were completed with their planned armament of three twin 4.7in gun turrets. *Laforey* was designated the flotilla leader. When the Tribal class *Gurkha* was sunk in April 1940, the men of the Gurkha regiments all gave up a day’s pay to fund a replacement. So, *Larne* was launched and commissioned as a new *Gurkha*.

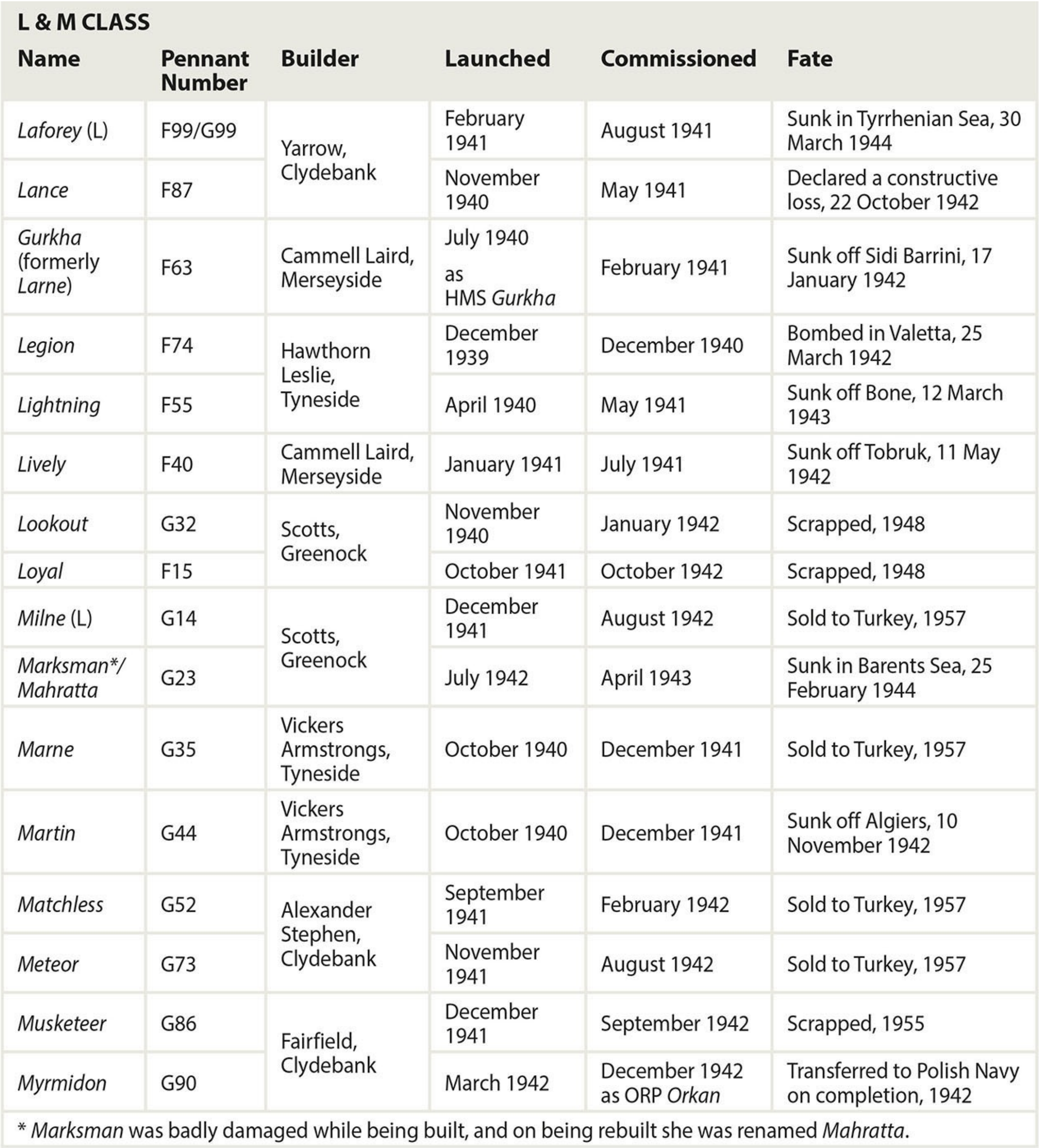


HMS *Lightning* entered service in May 1941, and was soon deployed in support of the Malta convoys. This shows her lying off Greenock in January 1942, after a return crossing of the Atlantic, when she formed part of Prime Minister Churchill's naval escort. She would return to the Mediterranean in February, but the following March was sunk by German E-boats off the Algerian coast.

All ships were fitted with Asdic, and carried depth charges (45 in the 4.7in ships, 110 in the 4in ships). They were also completed with search radar, while the 4.7in destroyers were additionally provided with fire control radar for their main armament. This first batch of eight L-class destroyers was approved in the 1937–38 budget. Eight more 4.7in M-class destroyers were ordered the following year, with *Milne* as their flotilla leader. In these though, a joint HA/LA gun director was fitted behind the bridge, and space was left for an AA director for the pom-poms, even though it was still under development. These destroyers were well regarded, and some naval observers argued that they were the finest-looking destroyers ever built for the Royal Navy.



The M-class flotilla leader HMS *Milne*, pictured in mid-December 1944, after emerging from a refit in Hull, prior to being sent to the Mediterranean. She carries a Type 276 (surface search) radar on top of her new lattice foremast, while a Type 291 (air search) radar is carried on top of her small mainmast. A Type 285 (fire control) radar sits atop her gun director.



L & M CLASS

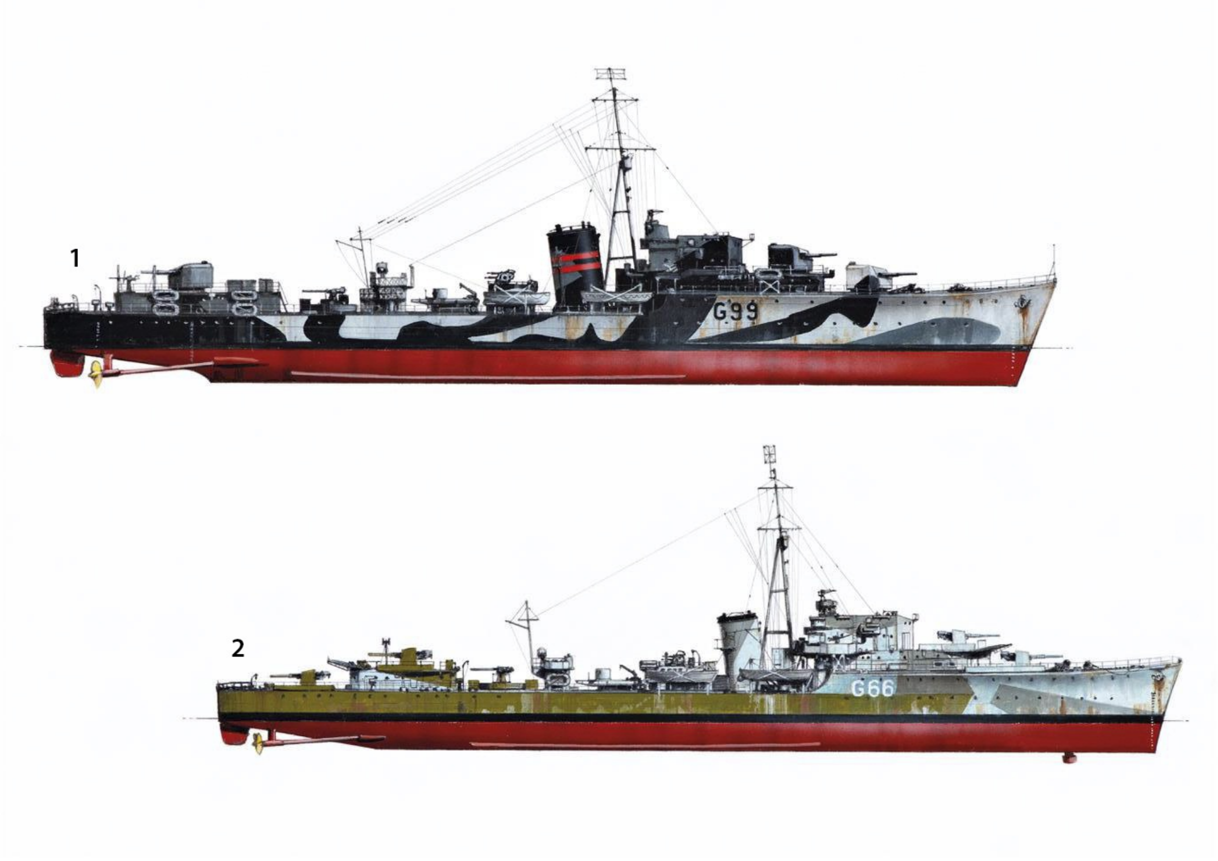
Name	Pennant Number	Builder	Launched	Commissioned	Fate
Laforey (L)	F99/G99	Yarrow, Clydebank	February 1941	August 1941	Sunk in Tyrrhenian Sea, 30 March 1944
Lance	F87		November 1940	May 1941	Declared a constructive loss, 22 October 1942
Gurkha (formerly *Larne*)	F63	Cammell Laird, Merseyside	July 1940 as HMS *Gurkha*	February 1941	Sunk off Sidi Barrini, 17 January 1942
Legion	F74	Hawthorn Leslie, Tyneside	December 1939	December 1940	Bombed in Valetta, 25 March 1942
Lightning	F55		April 1940	May 1941	Sunk off Bone, 12 March 1943
Lively	F40	Cammell Laird, Merseyside	January 1941	July 1941	Sunk off Tobruk, 11 May 1942
Lookout	G32	Scotts, Greenock	November 1940	January 1942	Scrapped, 1948
Loyal	F15		October 1941	October 1942	Scrapped, 1948
Milne (L)	G14	Scotts, Greenock	December 1941	August 1942	Sold to Turkey, 1957
*Marksman**/ *Mahratta*	G23		July 1942	April 1943	Sunk in Barents Sea, 25 February 1944
Marne	G35	Vickers Armstrongs, Tyneside	October 1940	December 1941	Sold to Turkey, 1957
Martin	G44	Vickers Armstrongs, Tyneside	October 1940	December 1941	Sunk off Algiers, 10 November 1942
Matchless	G52	Alexander Stephen, Clydebank	September 1941	February 1942	Sold to Turkey, 1957
Meteor	G73		November 1941	August 1942	Sold to Turkey, 1957
Musketeer	G86	Fairfield, Clydebank	December 1941	September 1942	Scrapped, 1955
Myrmidon	G90		March 1942	December 1942 as ORP *Orkan*	Transferred to Polish Navy on completion, 1942

* *Marksman* was badly damaged while being built, and on being rebuilt she was renamed *Mahratta*.

Specifications	
Displacement:	1,920 tons (1,950 tonnes) standard
Dimensions:	Length overall: 362ft 6in (110.5m); beam: 37ft (11.2m); draught: 10ft (3.05m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 48,000shp; maximum speed: 36 knots
Capacity:	567 tons (576 tonnes)
Range:	5,500nm at 15 knots

Armament:	Three twin 4.7in QF guns Mark XI (four twin 4in HA guns Mark XVI in *Gurkha*, *Lance*, *Legion* and *Lively*), one quadruple 2-pdr pom-pom, two quadruple 0.5in machine guns, eight 21in torpedoes in two quadruple launchers
Sensors:	Type 285
Complement:	221 men (156 in leaders)

C



1: HMS *LAFOREY* (F99/G99), 1942

As the destroyer leader of the L class, *Laforey* differed slightly from the other seven ships of her class in that she had a slightly enlarged bridge, and extra accommodation to house the staff of the 19th Destroyer Flotilla, to which she was assigned. After entering service in August 1941 she was almost immediately sent to Gibraltar, where she reinforced Force H. She spent the rest of the year operating from there, escorting larger warships or convoys, or hunting U-boats. This shows the destroyer as she looked that year, with a disruption scheme that favoured black, complemented by two shades of grey, and contrasting with the two red funnel bands that denoted her flotilla. By the time she was commissioned her after torpedoes had been replaced by a 4in AA gun, augmented by a quadruple pom-pom abaft her funnel, and six 20mm Oerlikons.

2: HMS *ORIBI* (G66), 1942

Commissioned during the summer of 1941, *Oribi* was the first O-class destroyer to enter service. She was sent to the Home Fleet, and spent the rest of the year escorting convoys and battle groups, and even taking part in Operation *Archery*, the commando raid on Vaagso in Norway. For much of 1942 she was deployed in support of the Arctic convoys, providing cover for eight of them before going into refit in June. She rejoined the fleet in October, when she was sent south, to support Operation *Torch* – the Allied landings in French North Africa. However, by the end of the year she was back with the Home Fleet, and heading back into Arctic waters. This shows *Oribi* as she looked that autumn, sporting the new camouflage scheme she retained until January 1944. By this stage her after torpedoes had been replaced by a 3in AA gun.

Wartime modifications

As these destroyers were all commissioned from late 1940 on, their AA armament was augmented in light of the lessons learned off Norway and Dunkirk. A single 4in HA gun was fitted in lieu of the after torpedo launcher in the destroyers carrying 4.7in guns. Those entering service before the autumn of 1941 retained their close-range AA weaponry – the rest had their quadruple machine guns replaced by six single 20mm Oerlikons during fitting out. The earlier destroyers – six L-class and two M-class – underwent this modification during 1942, with the exception of *Legion*, which was written off before the modifications could be made.

By 1944, the seven remaining destroyers of the class still in British service had received twin 20mm mountings on their bridge wings, with two more replacing the single Oerlikons on the searchlight platform. These two singles were moved to the quarterdeck. At the same time all surviving destroyers apart from *Musketeer* received a new lattice mast. By 1944 the single 4in gun was removed, and the torpedo tubes replaced in *Marne* and *Matchless*.

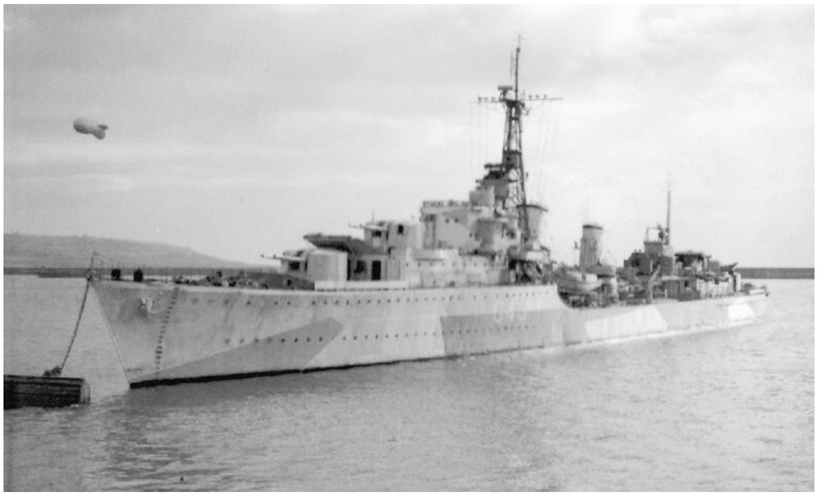
Initially, all these destroyers entered service carrying a Type 285 radar. In addition, all but *Legion* also carried a Type 286 in their foremast. *Lookout* and the M-class destroyers which entered service during 1942–43 received a Type 290 radar instead. *Marne* and *Martin* retained their Type 286. In 1944, all but one of the surviving destroyers of the joint class received Type 273 in lieu of their Type 286 or Type 290 radar. The exception was *Matchless*, which received an additional Type 271 set instead. By 1945, Type 277 replaced the Type 273, while Type 291 was also carried.

O- & P-class destroyers

These were the first destroyers built under the War Emergency Programme, thereby constituting the 1st and 2nd Emergency Flotillas. Existing propulsion and weapons systems were used in speed construction. The hull design was a slightly shortened version of the J, K & M-class hulls, and so their appearance was similar to that of their predecessors, although they were less well armed. Their design called for four single 4.7in guns, a quadruple pom-pom and two quadruple torpedo launchers.

All carried Asdic and 70 depth charges, as they were primarily designed as escort destroyers. Although they lacked the firepower of the earlier classes, they were easy to produce, and when they began entering service during 1941–42 it was found that they were seaworthy ships, ideal for duties such as escorting

Arctic convoys. The 16-strong O & P class represented a good balance of quantity and quality.

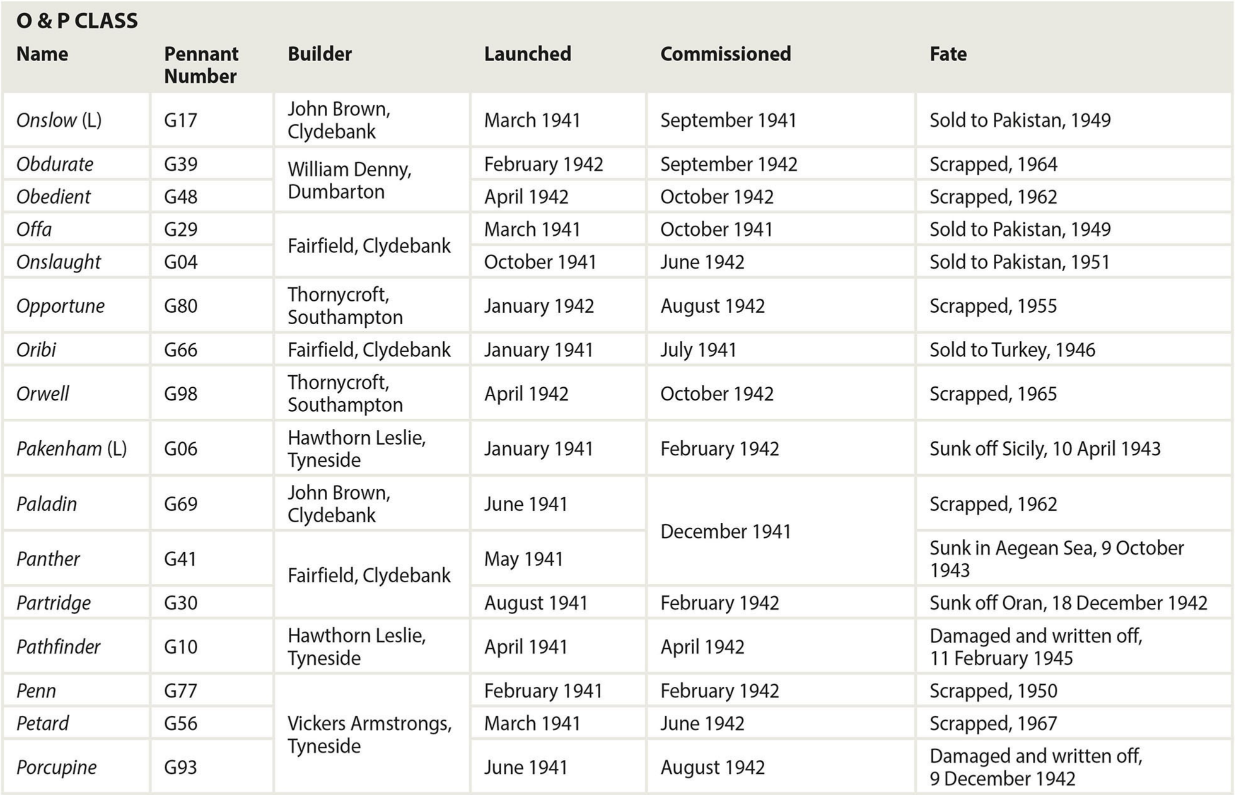


HMS *Mahratta* was named in recognition of the wartime support offered to Britain by the Indian government. This picture of her, taken in Scapa Flow in the summer of 1943, shows her 4in AA gun to good effect, and her quadruple pom-pom abaft her funnel. In February 1944 *Mahratta* was sunk by two torpedoes fired from U-990 while operating in support of an Arctic convoy.

The propulsion system was the same as that used in the J, K & M class – in fact this became standard for all War Standard destroyers. Inevitably, changes were made during their construction. *Onslow* and *Onslaught* received four single 4in HA guns instead of 4.7in ones, and a fifth 4in was installed on a bandstand mount, in lieu of the after torpedo tubes. Four more of the class – *Obdurate, Obedient*, *Opportune* and *Orwell* – also received the four single 4in guns, but instead of a fifth one they retained their after tubes. At the same time these four destroyers were also converted to carry mines. So, of the O class, only *Offa* and *Oribi* received their planned 4.7in guns.

The O-class destroyer HMS *Onslaught*, pictured in Scapa Flow in June 1942, shortly after entering service with the Home Fleet. She carried a Type 285 (AA fire control) radar on top of her gun director, and a Type 291 (air warning) radar on top of her foremast.

In October 1939 the Admiralty ordered another eight ships; the 2nd Emergency Flotilla. This would become the P class, but together the two groups formed a single class of 16 O & P destroyers. During the construction of the P class the Admiralty gave them four 4in guns, rather than 4.7in ones. However, no fifth gun was added, and so they retained both sets of torpedo tubes. *Onslow* and *Pakenham* were designated the flotilla leaders. Interestingly, owing to shortages, ‘Y’ gun in *Pakenham* and *Paladin* lacked a shield, and remained like this throughout their wartime careers. These 16 ships proved very successful despite their relatively light armament.



O & P CLASS

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Onslow (L)	G17	John Brown, Clydebank	March 1941	September 1941	Sold to Pakistan, 1949
Obdurate	G39	William Denny, Dumbarton	February 1942	September 1942	Scrapped, 1964
Obedient	G48		April 1942	October 1942	Scrapped, 1962
Offa	G29	Fairfield, Clydebank	March 1941	October 1941	Sold to Pakistan, 1949
Onslaught	G04		October 1941	June 1942	Sold to Pakistan, 1951
Opportune	G80	Thornycroft, Southampton	January 1942	August 1942	Scrapped, 1955
Oribi	G66	Fairfield, Clydebank	January 1941	July 1941	Sold to Turkey, 1946
Orwell	G98	Thornycroft, Southampton	April 1942	October 1942	Scrapped, 1965
Pakenham (L)	G06	Hawthorn Leslie, Tyneside	January 1941	February 1942	Sunk off Sicily, 10 April 1943
Paladin	G69	John Brown, Clydebank	June 1941	December 1941	Scrapped, 1962
Panther	G41	Fairfield, Clydebank	May 1941		Sunk in Aegean Sea, 9 October 1943
Partridge	G30		August 1941	February 1942	Sunk off Oran, 18 December 1942
Pathfinder	G10	Hawthorn Leslie, Tyneside	April 1941	April 1942	Damaged and written off, 11 February 1945
Penn	G77	Vickers Armstrongs, Tyneside	February 1941	February 1942	Scrapped, 1950
Petard	G56		March 1941	June 1942	Scrapped, 1967
Porcupine	G93		June 1941	August 1942	Damaged and written off, 9 December 1942

Specifications	
Displacement:	1,610 tons (1,633 tonnes) standard
Dimensions:	Length overall: 345ft (105m); beam: 35ft (10.6m); draught: 9ft (2.74m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots

Capacity:	484 tons (492 tonnes)
Range:	3,850nm at 20 knots
Armament:	Four single 4in guns (four single 4.7in QF guns Mark IX in *Offa* and *Oribi*), one single 4in HA gun, one quadruple 2-pdr pom-pom, four single 20mm Oerlikons, eight 21in torpedoes in two quadruple launchers (one launcher in *Onslow* and *Onslaught*). In addition all O class apart from *Offa* and *Oribi* carried a single 4in HA gun. Up to 60 mines (in *Obdurate*, *Obedient*, *Opportune* and *Orwell*)
Sensors:	Type 285, Type 286
Complement:	175 men (217 in *Onslow*, 228 in *Pakenham*)

Wartime modifications

In late 1941 a Type 290 radar replaced the Type 286 in all commissioned ships, and was installed in those still under construction. This was later replaced by a Type 291. In addition, in early 1943 *Offa* and *Oribi* acted as trial ships for the Type 272 radar. All ships carried a Type 285 radar, mounted on top of the DCT. In late 1941 or during fitting out all ships were equipped with four single 20mm Oerlikons, mounted on the bridge wings and searchlight platform. By 1944, the four minelayers had received two more, mounted on the sides of their after shelter deck. In 1943–44 *Onslow* and *Onslaught* had their after torpedo launcher replaced, losing their fifth 4in gun. In early 1945, *Petard* was rearmed with four 4in guns in two twin mountings. From April 1943 on, lattice foremasts were fitted in all remaining ships apart from *Oribi* – she retained her tripod mast throughout the war.

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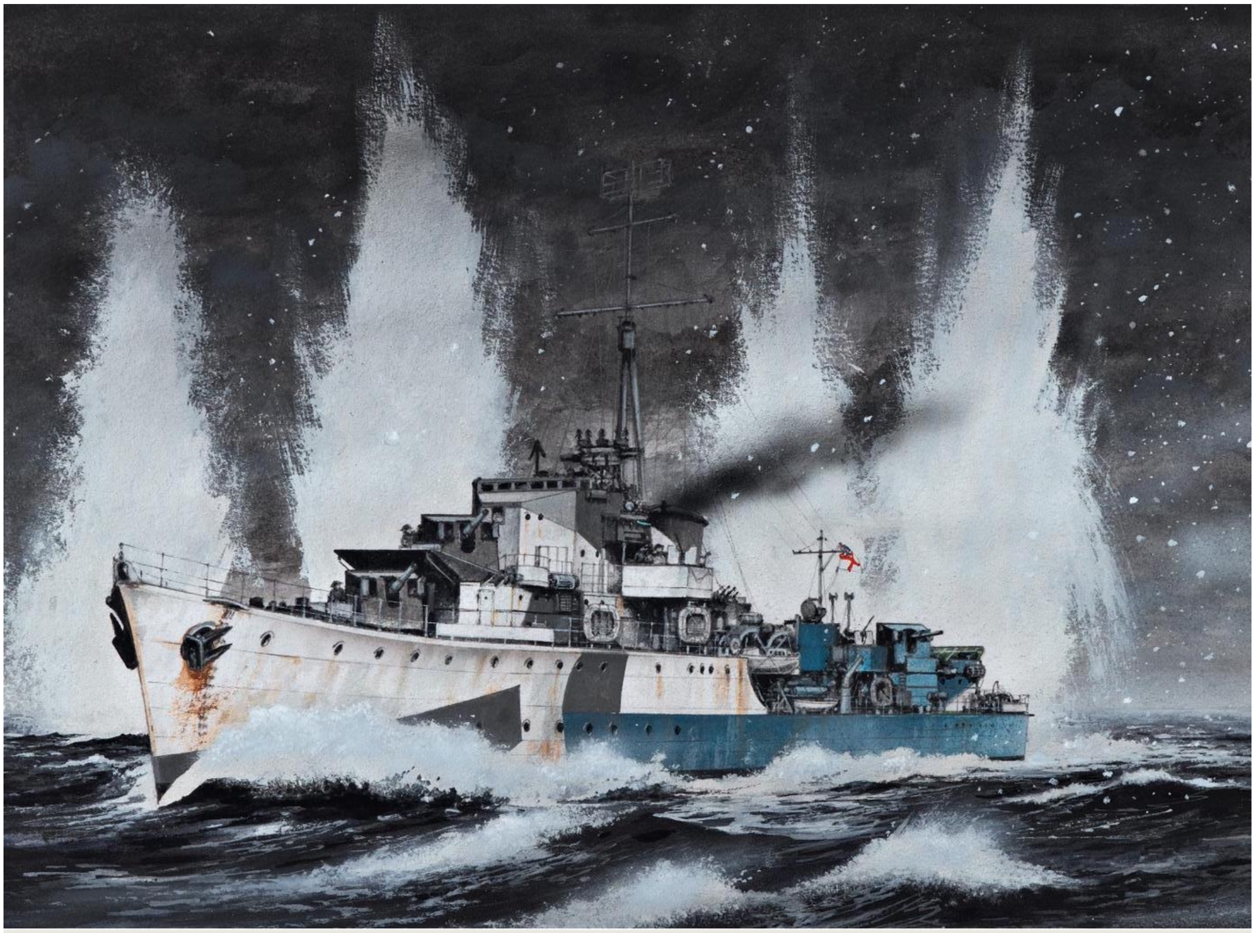
HMS *ONSLOW* (G17) AT THE BATTLE OF THE BARANTS SEA, 1942

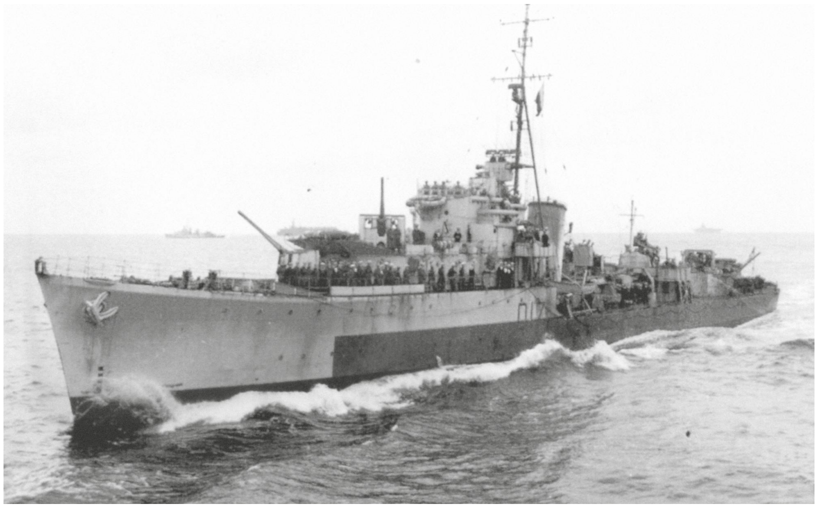


In late December 1942 the German *Kriegsmarine* made a determined effort to intercept and destroy Arctic Convoy JW51B, sending the *Panzerschiffe* (armoured ship) *Lützow* and the heavy cruiser *Admiral Hipper* to intercept it from different directions, accompanied by six destroyers. The convoy's 14 merchant ships were protected by a screen of destroyers and smaller escorts, while a covering force of two light cruisers stood ready to help if needed.
The two sides first made contact shortly before 8am on 31 December. The battle that followed was fought in the winter darkness, and snow squalls reduced visibility even further. At 9.40am Captain Sherbrooke in the flotilla leader *Onslow* spotted the *Hipper* to the north. His three destroyers – *Onslow*, *Obedient* and *Orwell* – opened fire and made as if to launch a torpedo attack, which forced the *Hipper* to turn away under cover of a squall.
The two sides maintained almost parallel courses, and at 10.18am Vice-Admiral Kummetz in the *Hipper* spotted two of the destroyers again, and the cruiser opened fire. Two minutes later *Onslow* was hit by the first of two salvoes, and Sherbrooke was grievously wounded. Still, he ordered *Onslow* and *Orwell* to turn away to the south, and contact was broken. Meanwhile the probe by *Lützow* was also thwarted by the arrival of the two British cruisers, and after the loss of a destroyer the Germans withdrew at 11.45am. This scene shows the action at 10.18am, when *Onslow* and *Orwell* astern of her first came under fire from the *Hipper*. The *Hipper* was 5 miles away to the north, and her first salvo of eight 8in shells overshot the *Onslow*. Her third salvo, which arrived less than a minute later, straddled and hit the British destroyer.

Q- & R-class destroyers

In 1940 the Admiralty ordered 16 more WEP destroyers, which duly became the Q & R class, and the 3rd and 4th Emergency Flotillas. *Quilliam* and *Rotherham* were designated their flotilla leaders. These ships were similar to the preceding O & P class, but were larger, utilizing a full-length J-, K- & N-class hull, albeit with a squared-off (transom) stern. This was a wise decision – the O & P destroyers were compact, with little room to add more weaponry. The extra length gave these and subsequent War Standard destroyers flexibility when it came to altering their weaponry or sensors.

Another advantage was that as they had fewer guns than the J, K & N-class ships, space that would have been used as magazines was used for fuel storage. This gave these destroyers an impressive range of 4,675 nautical miles at 20 knots – a thousand miles more than the J, K & Ns. A final benefit was that they proved to be stable ships, and therefore made good gun platforms.

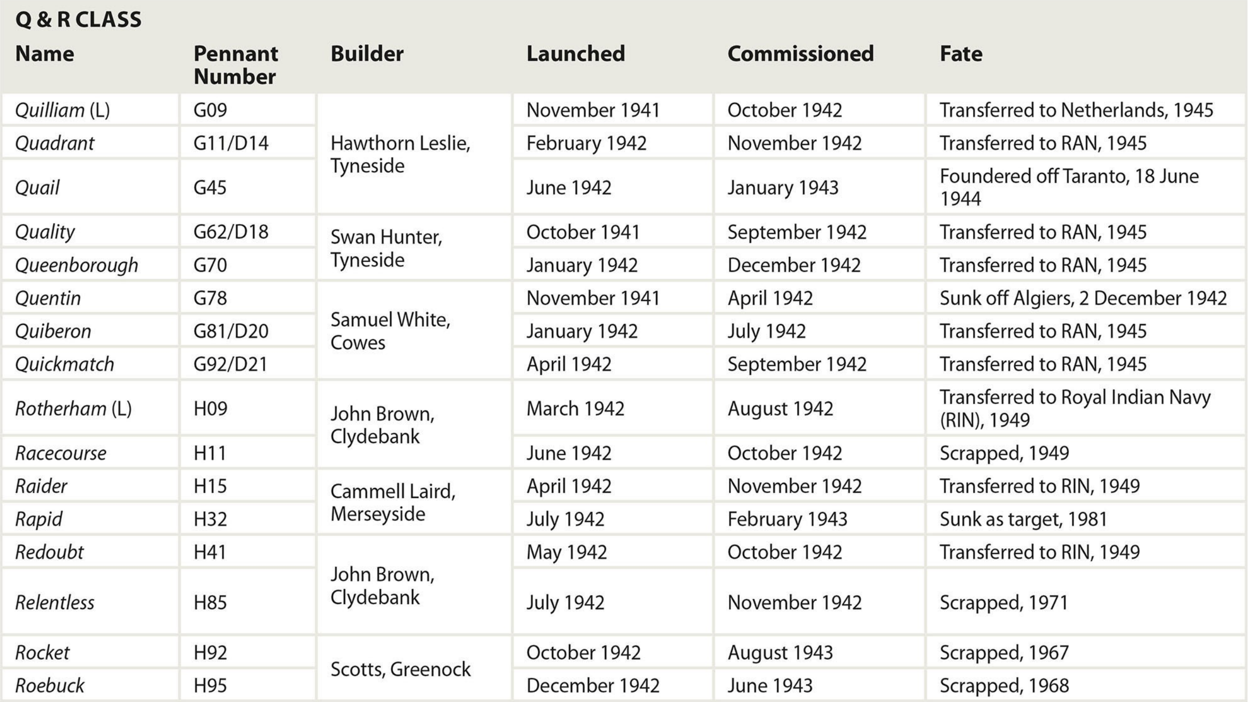


HMS *Quadrant*, pictured in mid-1945, while serving with the British Pacific Fleet. The photograph was taken from the American carrier USS *Wasp*. Her pennant number was changed in late 1944 to conform to US Navy protocol, as she was then serving in US task forces. After the war she was transferred to the Royal Australian Navy.

Their main armament consisted of four single 4.7in QF Mark IX guns. Their initial AA weaponry was made up of a quadruple pom-pom and six single Oerlikons. Unlike their predecessors they never received an AA gun amidships, retaining both quadruple torpedo launchers. Asdic was fitted, while the Q class carried 45 depth charges and the R class 70. However, in the former group ‘Y’ gun was easily removable, thereby creating the option to carry more depth charges on the quarterdeck.

HMAS *Quiberon* is typical of several wartime British destroyers, which, from the start, were crewed by Australians and commissioned into the Royal Australian Navy, while administratively still forming part of the Royal Navy. This made the point that strategically the British and Commonwealth navies formed a single unified body. She is pictured here in 1945, while serving with the British Pacific Fleet.

The eight R-class vessels were exact repeats of the Q class, apart from their additional depth charges, and the layout of accommodation. Traditionally, officers berthed aft and crew berthed forward. In the R class, the two groups were intermingled, with some officers berthing forward, and some crew aft. As the only way from one area to the other was via the upper deck, in theory this meant that watchkeeping crew could reach the bridge and other duty stations without being unduly exposed to the elements.



Q & R CLASS **Name**	**Pennant Number**	**Builder**	**Launched**	**Commissioned**	**Fate**
Quilliam (L)	G09	Hawthorn Leslie, Tyneside	November 1941	October 1942	Transferred to Netherlands, 1945
Quadrant	G11/D14		February 1942	November 1942	Transferred to RAN, 1945
Quail	G45		June 1942	January 1943	Foundered off Taranto, 18 June 1944
Quality	G62/D18	Swan Hunter, Tyneside	October 1941	September 1942	Transferred to RAN, 1945
Queenborough	G70		January 1942	December 1942	Transferred to RAN, 1945
Quentin	G78	Samuel White, Cowes	November 1941	April 1942	Sunk off Algiers, 2 December 1942
Quiberon	G81/D20		January 1942	July 1942	Transferred to RAN, 1945
Quickmatch	G92/D21		April 1942	September 1942	Transferred to RAN, 1945
Rotherham (L)	H09	John Brown, Clydebank	March 1942	August 1942	Transferred to Royal Indian Navy (RIN), 1949
Racecourse	H11		June 1942	October 1942	Scrapped, 1949
Raider	H15	Cammell Laird, Merseyside	April 1942	November 1942	Transferred to RIN, 1949
Rapid	H32		July 1942	February 1943	Sunk as target, 1981
Redoubt	H41	John Brown, Clydebank	May 1942	October 1942	Transferred to RIN, 1949
Relentless	H85		July 1942	November 1942	Scrapped, 1971
Rocket	H92	Scotts, Greenock	October 1942	August 1943	Scrapped, 1967
Roebuck	H95		December 1942	June 1943	Scrapped, 1968

Specifications	
Displacement:	1,705 tons (1,732 tonnes) standard
Dimensions:	Length overall: 358ft 3in (109.2m); beam: 35ft 8in (10.9m); draught: 9ft 6in (2.89m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four single 4.7in QF guns Mark IX, one quadruple 2-pdr pom-pom, six single 20mm Oerlikons, eight 21in torpedoes in two quadruple launchers
Sensors:	Type 285, Type 290
Complement:	175 men (225 in leaders)

Wartime modifications

Few wartime modifications were made, as these ships entered service with an adequate array of sensors and close-range AA guns. In 1944, the Type 290 radar set was replaced by a Type 291, while *Quality* and all the R-class vessels apart from *Rotherham* and *Raider* received a Type 272, mounted amidships (or on the foremast in *Racehorse* and *Redoubt* – the only R-class ships to receive lattice masts). *Raider* was also given a Type 271, mounted amidships. In early 1943, the two single Oerlikons mounted on the bridge wings of *Quail* were replaced by twin power-operated mounts.

S- & T-class destroyers

Ordered in early 1941, these 16 S- & T-class destroyers formed the 5th and 6th Emergency Flotillas. The original intention was to provide the ships with twin 4in HA mountings, or even US-built 5in DP guns, but eventually the single 4.7in Mark IX was adopted, albeit on a mounting capable of 55 degrees' elevation. These weapons were protected by improved gun shields. The exception was *Savage*, which was given an experimental twin 4.5in gun turret in 'A' position, while her after guns were re-bored to fit the same calibre of shell. Her 'B' mount position was unused.

These ships carried two quadruple torpedo launchers amidships, with the Bofors mounted between on the searchlight platform. This new radar-directed Hazemeyer twin 40mm Bofors gun served as the replacement for the quadruple pom-pom. A battery of four single Oerlikons completed these vessels' array of AA weaponry. In some ships the Bofors was not available before the destroyers entered service, and so *Scorpion* carried a twin Oerlikon in its place. To make up for this, her four single Oerlikons were also replaced with twin mountings. Similarly *Savage* never received a Bofors. Instead she was given two twin 20mm guns.

Here the Plotting Officer and his assistant – a leading seaman – follow the course of the engagement, while behind them the Anti-Submarine Warfare Officer monitors the information provided by the seamen on his right, who provide information from the target information array, the torpedo station and the ship's main search radar.

Once again the hull form was that of the J, K & Ns, with a transom stern. However, they were given an elegantly raked bow similar to the Tribals, to improve dryness forward. All carried lattice foremasts apart from *Saumarez*, *Savage*, *Scorpion* and *Tumult*. The T class, ordered in the summer of 1941, differed from the S class in that the earlier batch received extra insulation during fitting out, for service in Arctic waters, while the T class did not, as the ships were destined for the Mediterranean. In this group the designated flotilla leaders were *Saumarez* and *Troubridge*.

S & T CLASS

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Saumarez (L)	G12	Hawthorn Leslie, Tyneside	November 1942	July 1943	Scrapped, 1950
Savage	G20		September 1942	June 1943	Scrapped, 1962
Scorpion	G72	Cammell Laird, Merseyside	August 1942	May 1943	Transferred to Dutch Navy, 1945
Scourge	G01		December 1942	July 1943	Transferred to Dutch Navy, 1945
Serapis	G94	Scotts, Greenock	April 1943	December 1943	Transferred to Dutch Navy, 1945
Shark	G03		June 1943	March 1944 as HNoMS *Svenner*	Transferred to Norwegian Navy, 1944
Success	G26	Samuel White, Cowes	March 1943	September 1943 as HNoMS *Stord*	Transferred to Norwegian Navy, 1943
Swift	G46		June 1943	December 1943	Sunk off Normandy, 24 June 1944
Troubridge (L)	R00	John Brown, Clydebank	September 1942	March 1943	Scrapped, 1970
Teazer	R23/D45	Cammell Laird, Merseyside	January 1943	September 1943	Scrapped, 1965
Tenacious	R45		March 1943	October 1943	
Termagant	R89/D47	William Denny, Dumbarton			
Terpsichore	R33		June 1943	January 1944	Scrapped, 1966
Tumult	R11	John Brown, Clydebank	November 1942	April 1943	Scrapped, 1965
Tuscan	R56	Swan Hunter, Tyneside	May 1942	March 1943	
Tyrian	R67		July 1942	April 1943	

Specifications	
Displacement:	1,710 tons (1,737 tonnes) standard
Dimensions:	Length overall: 362ft 9in (110.5m); beam: 35ft 8in (10.9m); draught: 10ft (3.0m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four single 4.7in QF guns Mark IX (one twin and two single 4.5in QF guns Marks III & IV in *Savage*), one Hazemeyer twin 40mm Bofors (not *Scorpion*, *Savage* and *Tumult*), four single 20mm Oerlikons (replaced by two twin 20mm Oerlikons in *Savage* and *Terpsichore*, five in *Scorpion* and six in *Tumult*), eight 21in torpedoes in two quadruple launchers
Sensors:	Type 285, Type 290, Type 271 (*Savage* only), Type 272 (*Tumult* only)
Complement:	180 men (225 in leaders)

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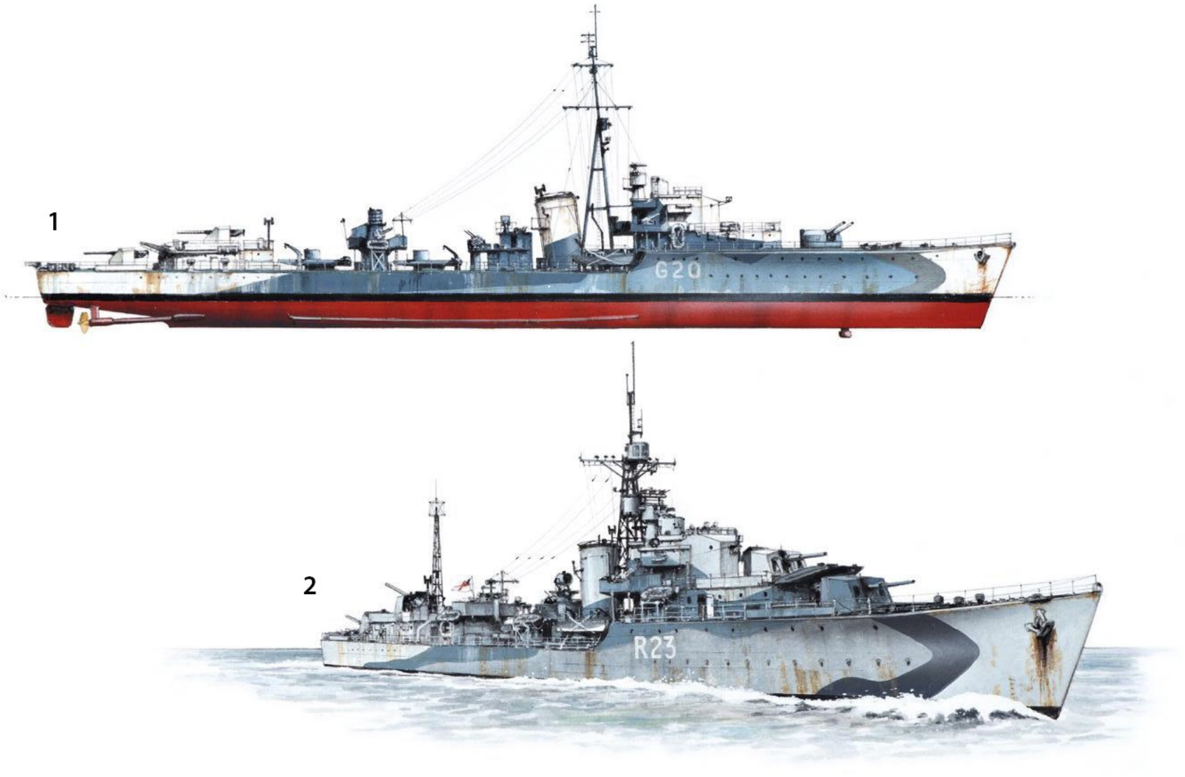


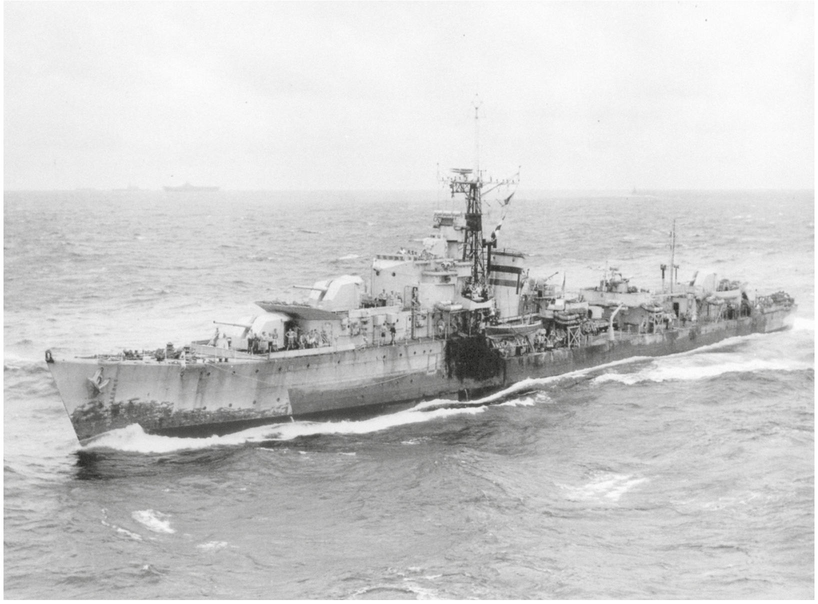
1: HMS *SAVAGE* (G20), 1943
The S-class destroyer *Savage* entered service with the Home Fleet in June 1943, and almost immediately took part in diversionary operations off Norway, staged during the Allied landings in Sicily. That autumn she was deployed in support of Arctic convoys, and in December she took part in the battle of North Cape, when her torpedoes helped cripple and sink the German battlecruiser *Scharnhorst*. This shows *Savage* as she appeared during the battle, sporting an Admiralty disruptive camouflage pattern. She was the only ship of her class to carry the experimental twin 4.5in gun turret, which was eventually adopted in the Battle class. Her ‘X’ and ‘Y’ position guns were also 4.5in pieces, unlike the 4.7in guns carried in all other ships of her class.

2: HMS *TEAZER* (R23/D45), 1943
While the eight T-class destroyers were similar to those of the preceding S class, they were not adapted for Arctic service. So, when *Teazer* joined the fleet in September 1943, she was sent to the Mediterranean, and by November she was off Italy’s western coast, bombarding German targets behind the Garigliano River, in support of the Allied attempts to breach the

Gustav Line. From January 1944 on, she performed similar missions in the Adriatic, before being redeployed to support the Allied landings in the south of France. This shows *Teazer* as she appeared during her time in the Mediterranean. Like other ships in her class she was fitted with a lattice mast, and sported an impressive array of close-range AA guns – a pair of power-mounted twin 20mm on her bridge wings, plus four single 20mm and one 40mm gun amidships.

Wartime modifications

In late 1943 *Scorpion* had her fifth twin Oerlikon replaced by a quadruple pom-pom. At the same time *Saumarez*, *Scorpion* and *Tumult* received lattice foremasts, albeit shorter versions than those of their sisters. All ships apart from *Savage* were fitted with Type 272 radar, while Type 290 was replaced by Type 291. In addition the T-class vessels received Type 293, and in early 1944 *Tumult* was fitted with a Hazemeyer Bofors. Most ships of her class also replaced their single Oerlikons with single Bofors. In early 1945 *Saumarez* received four single Bofors, while Type 276 replaced Type 272 in all ships.



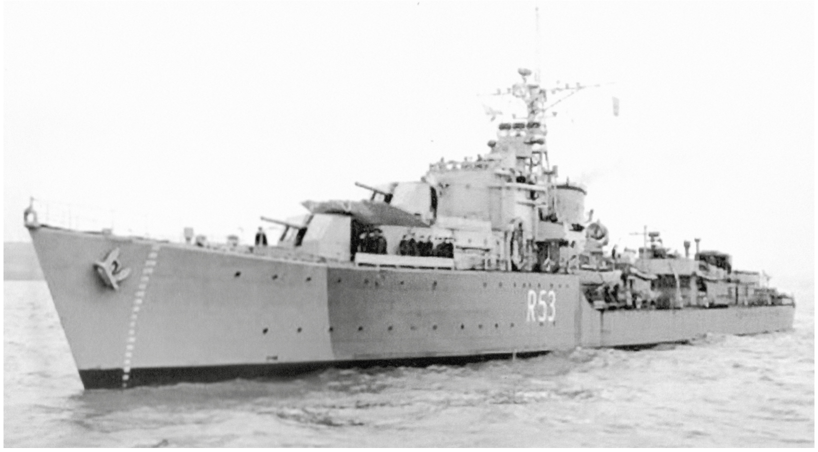
The T-class destroyer HMS *Terpsichore* entered service in January 1944, and was sent to the Mediterranean, where she saw action during Operation *Dragoon* (the landings in the south of France) and operations in the Aegean. She is pictured here in 1945, during service with the British Pacific Fleet.

U- & V-class destroyers

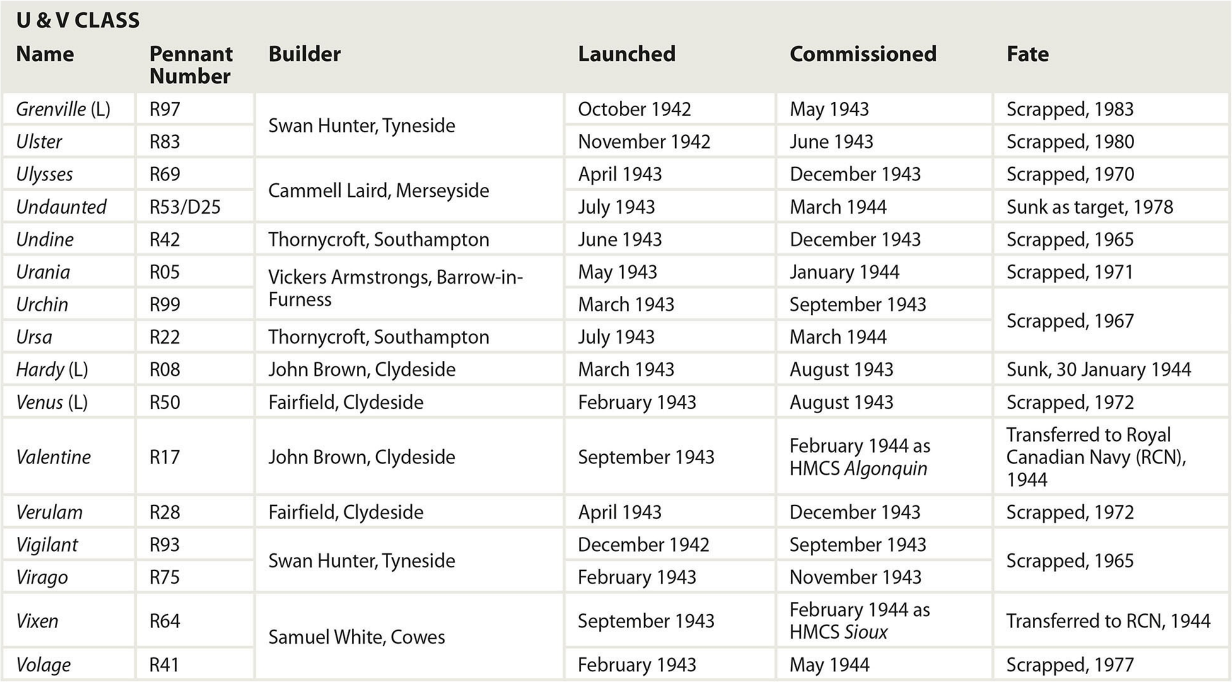
In the summer of 1941 another group of 16 War Standard destroyers was ordered, which became the U & V class, and the 7th and 8th Emergency Flotillas. They were repeats of the S- & T-class destroyers with their J-, K- & N-class hull form, with Tribal-class bow. Like the preceding class, the V class was modified for Arctic service while the U class was not, even though some of these ships did eventually support Arctic convoys.

All of them received short lattice masts apart from the three flotilla leaders, *Grenville*, *Hardy* and *Venus*. The first two names reflect a return to the older tradition of naming flotilla leaders after important sea captains. *Venus* was fitted out as an additional leader, an acknowledgement that, in wartime, flotillas were rarely deployed together in eight-ship units. Like their predecessors these ships carried four single 4.7in Mark IX guns, owing to a shortage of Bofors guns those ships completed before August 1943 carried a quadruple pom-pom amidships. However, all ships received four power-operated twin Oerlikons.

As usual there were exceptions. *Urchin* had two single Oerlikons instead of a pom-pom, and by October 1943, all uncompleted ships were fitted with a Hazemeyer Bofors before commissioning. The exceptions were *Ulysses*, which never received one, and *Volage*, which entered service in the summer of 1944 armed with the quadruple pom-pom instead. These ships began joining the fleet in the summer of 1943, and proved their worth as powerful AA ships off Anzio, at the Normandy beachhead, and in the Far East.



The U-class destroyer HMS *Undaunted* as she appeared when she joined the Home Fleet in the spring of 1944. She was then sent south to support the Allied landings in Normandy, before being redeployed to the Pacific. On her short lattice foremast is a Type 276 (surface search) radar.



U & V CLASS

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Grenville (L)	R97	Swan Hunter, Tyneside	October 1942	May 1943	Scrapped, 1983
Ulster	R83		November 1942	June 1943	Scrapped, 1980
Ulysses	R69	Cammell Laird, Merseyside	April 1943	December 1943	Scrapped, 1970
Undaunted	R53/D25		July 1943	March 1944	Sunk as target, 1978
Undine	R42	Thornycroft, Southampton	June 1943	December 1943	Scrapped, 1965
Urania	R05	Vickers Armstrongs, Barrow-in-Furness	May 1943	January 1944	Scrapped, 1971
Urchin	R99		March 1943	September 1943	Scrapped, 1967
Ursa	R22	Thornycroft, Southampton	July 1943	March 1944	
Hardy (L)	R08	John Brown, Clydeside	March 1943	August 1943	Sunk, 30 January 1944
Venus (L)	R50	Fairfield, Clydeside	February 1943	August 1943	Scrapped, 1972
Valentine	R17	John Brown, Clydeside	September 1943	February 1944 as HMCS *Algonquin*	Transferred to Royal Canadian Navy (RCN), 1944
Verulam	R28	Fairfield, Clydeside	April 1943	December 1943	Scrapped, 1972
Vigilant	R93	Swan Hunter, Tyneside	December 1942	September 1943	Scrapped, 1965
Virago	R75		February 1943	November 1943	
Vixen	R64	Samuel White, Cowes	September 1943	February 1944 as HMCS *Sioux*	Transferred to RCN, 1944
Volage	R41		February 1943	May 1944	Scrapped, 1977

Specifications	
Displacement:	1,777 tons (1,737 tonnes) standard (U class), 1,808 tons (1,837 tonnes) standard (V class)
Dimensions:	Length overall: 362ft 9in (110.5m); beam: 35ft 8in (10.9m); draught: 10ft (3.0m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four single 4.7in QF guns Mark IX, either one quadruple 2-pdr (*Grenville*, *Ulster*, *Ulysses*, *Hardy*, *Vigilant* and *Volage* only) or one Hazemeyer twin 40mm Bofors (*Urchin* had neither), four twin 20mm Oerlikons, two single 20mm Oerlikons (*Urchin* only), eight 21in torpedoes in two quadruple launchers
Sensors:	Type 285, Type 290 (*Undaunted*, *Urania*, *Ursa*, *Valentine*, *Vixen* and *Volage* had Type 276 and Type 291 instead), Type 272 (*Hardy*, *Urchin*, *Ulster*, *Urania* and *Vigilant* only).
Complement:	180 men (225 in leaders)

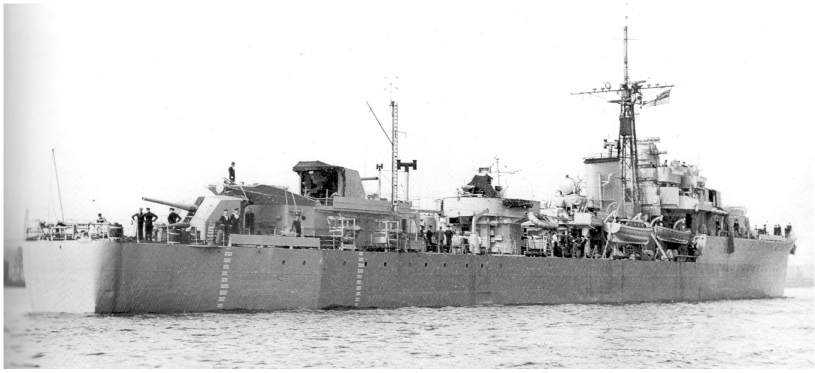
Wartime modifications

Grenville, *Ulster* and *Venus* received lattice masts during the winter of 1943/44. In early 1944 those ships with Type 272 radar had it replaced by Type 276. In July 1944 *Urchin* and *Ulysses* were fitted with ex-army single 40mm Bofors (*Ulysses* retained her pom-pom), and in 1945 all ships sent to the Pacific had their twin Oerlikon mountings replaced by single Bofors. Additionally, *Volage* carried four single Bofors. At the same time all V-class ships had their insulating Arctic protection removed to reduce weight. In June 1945, *Vigilant* was given two single Bofors in lieu of her two aftermost twin Oerlikons, while two more Bofors were fitted to the bridge wings.

The V-class destroyer HMS *Volage* joined the Home Fleet in the summer of 1944, and was used to support naval sweeps in Norwegian waters, and provide cover for an Arctic convoy. She was then sent to the Far East, but thanks to an untimely refit she missed the battle of the Malacca Strait, This photograph of *Volage* was taken during the autumn of 1944.

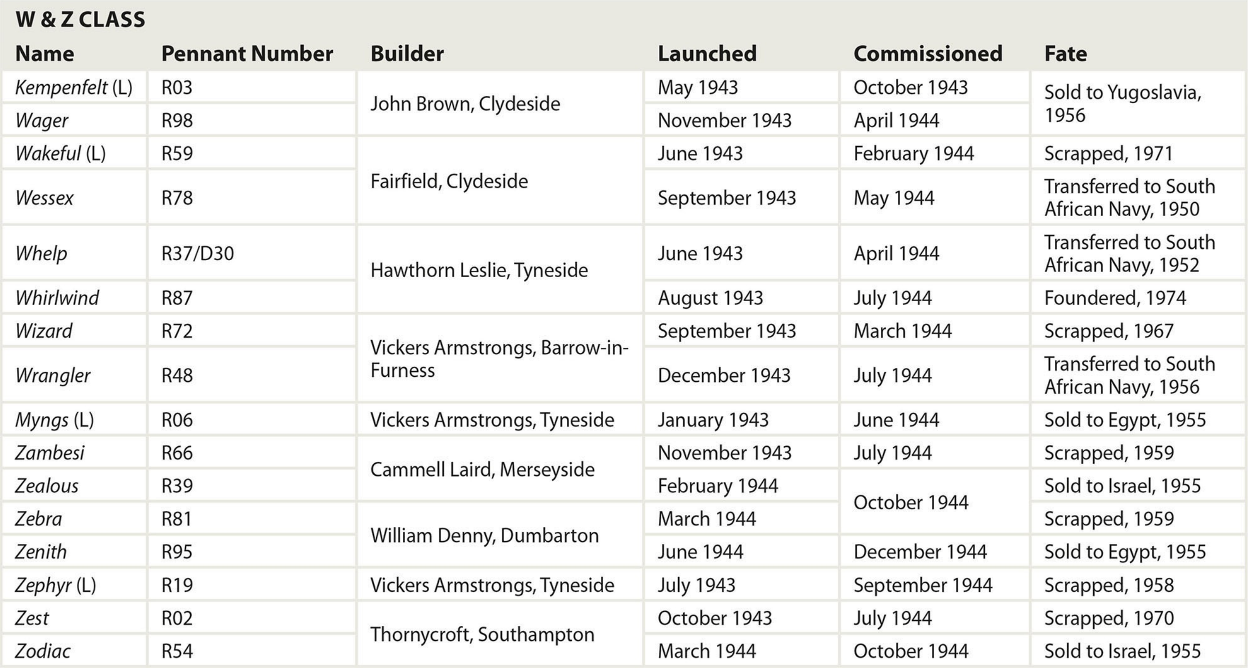
W- & Z-class destroyers

The W- & Z-class destroyers, ordered in the spring of 1942, were a repeat of the previous U & Vs, with some minor modifications, and formed the 9th and 10th Emergency Flotillas. Each batch had two leaders, *Kempenfelt* and *Wakeful,* and *Myngs* and *Zephyr*. These destroyers were the first entire class completed with lattice rather than tripod masts. They also carried a new Mark III rangefinder and DCT abaft the bridge, which was fully dual-purpose, capable of directing both surface and AA fire. The armament of the two flotillas differed, though. Like most of the War Standard destroyers before them the W class carried four 4.7in Mark IX guns apiece. They were the last British destroyers to carry this weapon, which had been in service since 1918. Although otherwise virtually identical, the Z-class destroyers were equipped with four single 4.5in guns, of the kind first trialled in *Savage*. Although they had an elevation of only 55 degrees, they were considered dual-purpose guns, and came with their own Mark VI dual-purpose DCT. All these ships were fitted with improved Asdic, and carried 70 depth charges apiece.



HMS *Kempenfelt* was one of two flotilla leaders of the V class. She was the first of her class to enter service, and spent a year in the Mediterranean and home waters, before being sent east in October 1944 to join the British Pacific Fleet. This photograph was taken after the refit she underwent in Cardiff before her departure.

Supply problems hindered their fitting out. So, while the W & Zs were supposed to carry a Hazemeyer Bofors, *Whelp* and *Wessex* were commissioned carrying a quadruple pom-pom instead. Similarly the Mark VI director had teething problems, and so an interim 'K director' was ordered, a version of that used in the L & Ms, adapted for dual-purpose fire control. It was fitted to *Myngs*, but proved inadequate, and had to be replaced. Finally, *Zambesi* and *Zest* were fitted with short lattice masts, while all the other destroyers of the class had tall ones. The close-range AA battery of four twin Oerlikons was supplied to most ships, but in the Z-class vessels earmarked for service in the Far East single pom-poms on power mountings were supplied instead.



W & Z CLASS

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Kempenfelt (L)	R03	John Brown, Clydeside	May 1943	October 1943	Sold to Yugoslavia, 1956
Wager	R98		November 1943	April 1944	
Wakeful (L)	R59	Fairfield, Clydeside	June 1943	February 1944	Scrapped, 1971
Wessex	R78		September 1943	May 1944	Transferred to South African Navy, 1950
Whelp	R37/D30	Hawthorn Leslie, Tyneside	June 1943	April 1944	Transferred to South African Navy, 1952
Whirlwind	R87		August 1943	July 1944	Foundered, 1974
Wizard	R72	Vickers Armstrongs, Barrow-in-Furness	September 1943	March 1944	Scrapped, 1967
Wrangler	R48		December 1943	July 1944	Transferred to South African Navy, 1956
Myngs (L)	R06	Vickers Armstrongs, Tyneside	January 1943	June 1944	Sold to Egypt, 1955
Zambesi	R66	Cammell Laird, Merseyside	November 1943	July 1944	Scrapped, 1959
Zealous	R39		February 1944	October 1944	Sold to Israel, 1955
Zebra	R81	William Denny, Dumbarton	March 1944		Scrapped, 1959
Zenith	R95		June 1944	December 1944	Sold to Egypt, 1955
Zephyr (L)	R19	Vickers Armstrongs, Tyneside	July 1943	September 1944	Scrapped, 1958
Zest	R02	Thornycroft, Southampton	October 1943	July 1944	Scrapped, 1970
Zodiac	R54		March 1944	October 1944	Sold to Israel, 1955

Specifications	
Displacement:	1,710 tons (1,737 tonnes) standard
Dimensions:	Length overall: 362ft 9in (110.5m); beam: 35ft 8in (10.9m); draught: 10ft (3.0m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four single 4.7in guns (4.5in in Z class), one Hazemeyer twin 40mm Bofors (one quadruple 2-pdr instead in *Whelp* and *Wessex*), four twin 20mm Oerlikons (four single 2-pdr pom-poms in *Zenith* and *Zest*), eight 21in torpedoes in two quadruple launchers
Sensors:	Type 276 (Type 272 in *Kempenfelt*), Type 285 (Z class), Type 271 (W class), Type 291, Type 293 (Z class)
Complement:	186 men (222 in leaders)

Wartime modifications

In 1945 the twin Oerlikons in *Wizard* and *Zephyr* were replaced by four single power-operated pom-poms, while a single Bofors was fitted amidships in *Wizard* and *Myngs*. *Myngs* also received two similar pom-poms, which replaced the twin Oerlikons on her bridge wings.

C-class destroyers

After the Z-class destroyers were ordered the Admiralty returned to the start of the alphabet. However, to avoid confusion with existing A- & B-class destroyers it dubbed its next destroyer group the C class, as all older C-class ships had been transferred to Canada before the war. Originally, four batches of this class were planned of eight destroyers apiece. Each batch though, began with a different second letter, creating batches of Ca, Ch, Co and Cr vessels. Only two ships of this fourth Cr batch were commissioned into the Royal Navy – the rest were transferred to other Allied or Commonwealth navies.

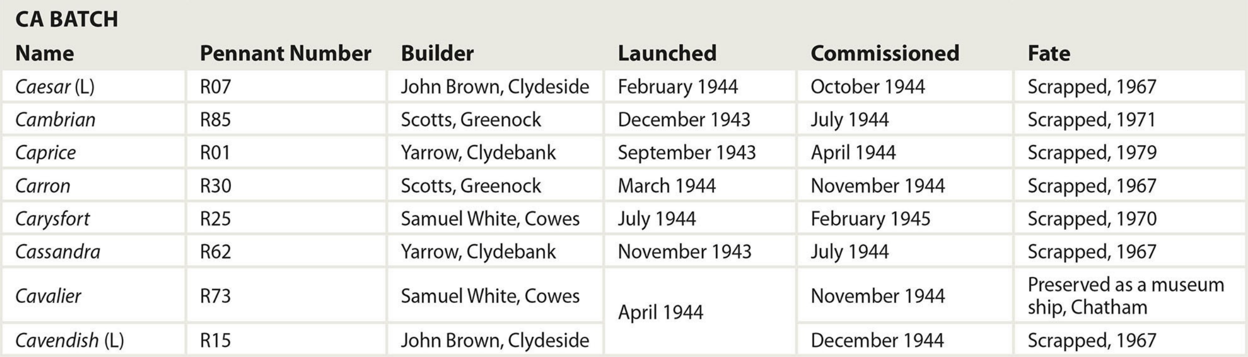
The original intention was to make these a repeat of the Z class, but by 1943 plans were modified to incorporate the latest developments in radar and fire control. In the end only the eight Ca-batch vessels ordered in the spring of 1942 were repeats of the 4.5in gun-armed Z-class ships. However, they were completed with four single power-operated pom-poms, mounted on the bridge wings and behind the funnel. Also, while all the others carried a Hazemeyer single Bofors amidships, *Caprice* carried a quadruple pom-pom instead. These ships, forming the 11th Emergency Flotilla, had two leaders – *Caesar* and *Cavendish*.

The other three batches, the Ch-, Co- and Cr-batch vessels, were effectively advanced versions of the War Standard destroyer design. While the hull form remained the same as preceding classes, all the C-class destroyers apart from the Ca-batch ships were built using welded rather than riveted construction. Also, to compensate for the added top-weight of their improved suite of sensors and fire control equipment, their torpedo armament was reduced to one quadruple launcher. All C-class destroyers carried an improved Asdic array, and 35 depth charges apiece. Close-range AA weaponry consisted of the new Mark V version of the Hazemeyer Bofors, and two single power-operated pom-poms mounted amidships. However, *Concord*, *Comus* and all of the Cr-batch destroyers were provided with two single Bofors instead.

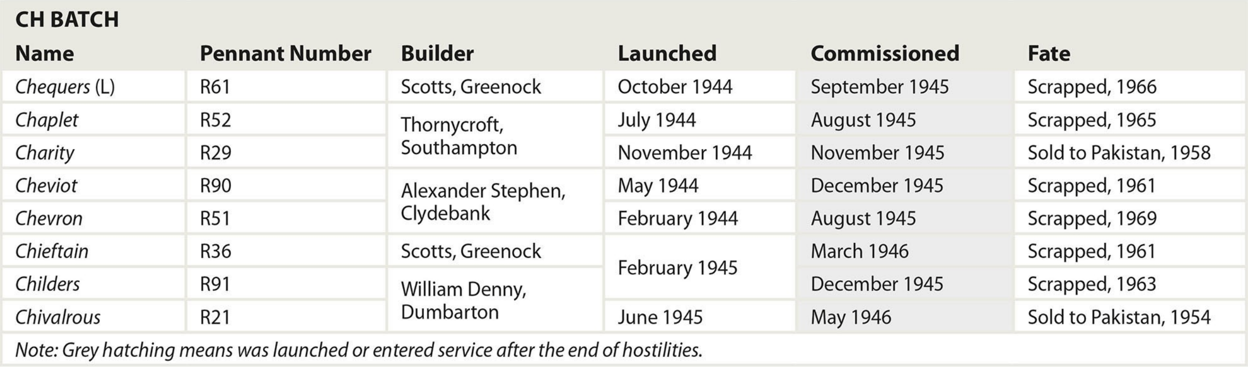
The Ca class were effectively repeats of the Z class, with a main armament of four 4.5in guns which, thanks to their elevation of 55 degrees, were capable of acting as dual-purpose weapons.

This is HMS *Caesar*, pictured in 1945, shortly before her deployment to the Far East.

Major delays in the supply of the new Mark VI DCT and its attendant Type 275 radar led to the late delivery of many of the C class. Therefore, while all the Ca-batch ships entered service during the war, of the 18 Ch-, Co- and Cr-batch destroyers only the *Comet* actually entered service before Japan surrendered. Incidentally, one of these 24 C-class destroyers survives today – the only extant British wartime destroyer, preserved as a museum ship in Chatham Historic Dockyard (see **plate F2**).



CA BATCH					
Name	**Pennant Number**	**Builder**	**Launched**	**Commissioned**	**Fate**
Caesar (L)	R07	John Brown, Clydeside	February 1944	October 1944	Scrapped, 1967
Cambrian	R85	Scotts, Greenock	December 1943	July 1944	Scrapped, 1971
Caprice	R01	Yarrow, Clydebank	September 1943	April 1944	Scrapped, 1979
Carron	R30	Scotts, Greenock	March 1944	November 1944	Scrapped, 1967
Carysfort	R25	Samuel White, Cowes	July 1944	February 1945	Scrapped, 1970
Cassandra	R62	Yarrow, Clydebank	November 1943	July 1944	Scrapped, 1967
Cavalier	R73	Samuel White, Cowes	April 1944	November 1944	Preserved as a museum ship, Chatham
Cavendish (L)	R15	John Brown, Clydeside		December 1944	Scrapped, 1967



CH BATCH					
Name	**Pennant Number**	**Builder**	**Launched**	**Commissioned**	**Fate**
Chequers (L)	R61	Scotts, Greenock	October 1944	September 1945	Scrapped, 1966
Chaplet	R52	Thornycroft, Southampton	July 1944	August 1945	Scrapped, 1965
Charity	R29		November 1944	November 1945	Sold to Pakistan, 1958
Cheviot	R90	Alexander Stephen, Clydebank	May 1944	December 1945	Scrapped, 1961
Chevron	R51		February 1944	August 1945	Scrapped, 1969
Chieftain	R36	Scotts, Greenock	February 1945	March 1946	Scrapped, 1961
Childers	R91	William Denny, Dumbarton		December 1945	Scrapped, 1963
Chivalrous	R21		June 1945	May 1946	Sold to Pakistan, 1954
Note: Grey hatching means was launched or entered service after the end of hostilities.					

CO BATCH

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Constance (L)	R71	Vickers Armstrongs, Tyneside	March 1943	December 1945	Scrapped, 1956
Cockade	R34	Yarrow, Clydebank	March 1944	September 1945	Scrapped, 1964
Comet	R26		June 1944	June 1945	Scrapped, 1962
Comus	R43	Thornycroft, Southampton	March 1945	July 1946	Scrapped, 1958
Concord	R63	Thornycroft, Southampton	November 1943	December 1946	Scrapped, 1962
Consort	R76	Alexander Stephen, Clydebank	May 1943	March 1946	Scrapped, 1961
Contest	R12	Samuel White, Cowes	November 1943	November 1945	Scrapped, 1960
Cossack	R57	Vickers Armstrongs, Tyneside	May 1944	September 1945	Scrapped, 1961

CR BATCH

Name	Pennant number	Builder	Launched	Commissioned	Fate
Crescent (L)	R16	John Brown, Clydebank	July 1944	August 1945	Transferred to RCN, 1946
Creole	R82	Samuel White, Cowes	November 1945	October 1946	Sold to Pakistan, 1956
Crispin	R68	Samuel White, Cowes	June 1945	July 1946	Sold to Pakistan, 1958
Croiziers	R27	Yarrow, Clydebank	August 1944	November 1945	Sold to Norway, 1946
Cromwell	R35	Scotts, Greenock	August 1945	September 1946 as HNoMS *Bergen*	Sold to Norway before completion, 1946
Crown	R46	Scotts, Greenock	December 1945	April 1947 as HNoMS *Oslo*	Sold to Norway before completion, 1946
Crusader	R20	John Brown, Clydebank	October 1944	November 1945 as HMCS *Crusader*	Transferred to RCN on completion, 1945
Crystal	R38	Yarrow, Clydebank	February 1945	February 1946	Sold to Norway, 1946

Specifications Ca batch

Displacement:	1,710 tons (1,737 tonnes) standard
Dimensions:	Length overall: 362ft 9in (110.5m); beam: 35ft 8in (10.9m); draught: 10ft (3.0m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp; maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four 4.75in guns, one Hazemeyer twin 40mm Bofors (*Caprice* carried a quadruple pom-pom instead), four single 2-pdr pom-poms, eight 21in torpedoes in two quadruple launchers
Sensors:	Type 276, Type 291, Type 293
Complement:	186 men (222 in leaders)

Specifications Ch, Co and Cr batches

Displacement:	1,825 tons (1,854 tonnes) standard
Dimensions:	Length overall: 362ft 9in (110.5m); beam: 35ft 8in (10.9m); draught: 10 (3.05m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 40,000shp;

	maximum speed: 36 knots
Capacity:	615 tons (625 tonnes)
Range:	4,680nm at 20 knots
Armament:	Four single 4.5in QF Mark IV guns; one Hazemeyer twin 40mm Bofors, two single 2-pdr pom-poms (two single 40mm Bofors in *Concord*, *Comus* and all Cr-class ships instead), two single 20mm Oerlikons, four 21in torpedoes in one quadruple launcher
Sensors:	Type 275, Type 276, Type 291, Type 293
Complement:	186 men (222 in leaders)

Wartime modifications

No significant modifications were made to the C class during the war.

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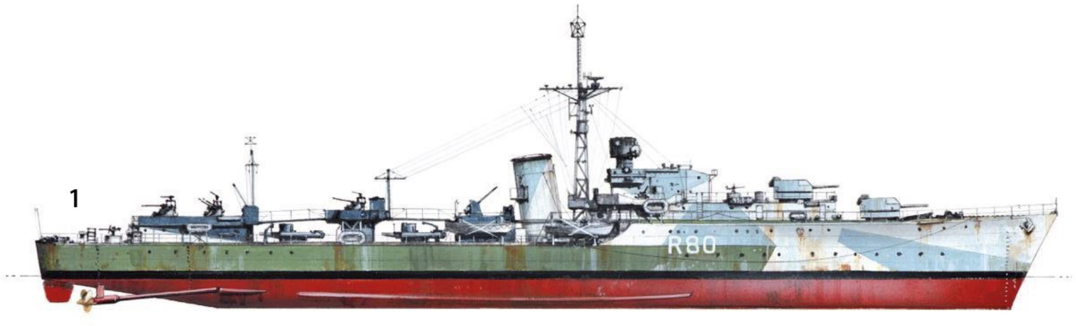
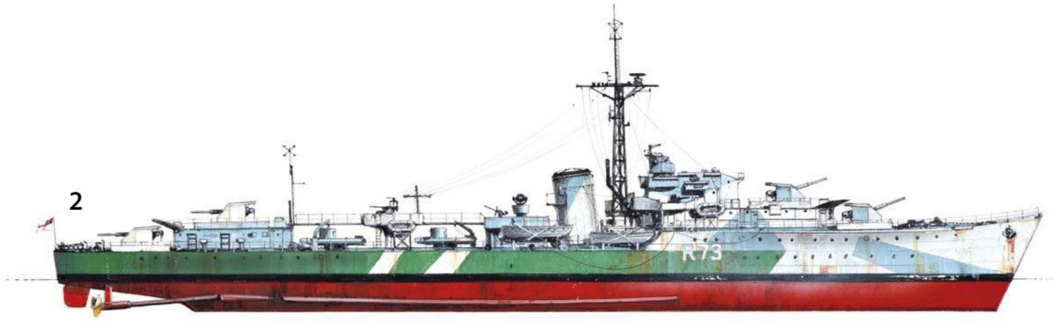




1: HMS *BARFLEUR* (R80), 1944

The Battle-class destroyers which entered service from September 1944 on were the Admiralty's answer to the lack of AA protection in their destroyer fleet. Their powerful armament of two twin 4.5in DP guns, a 4in AA gun and a large battery of 20mm and 40mm pieces, backed by fire control radar, was exactly what had been needed. However, *Barfleur* was the only ship of her class to see action. After extensive trials she was sent east to join the British Pacific Fleet, and by July 1945 she was seconded to the US Third Fleet. She protected Allied carriers as they conducted air attacks against Japan, and she was present in Tokyo Bay on 2 September 1945, when the Japanese surrendered. This view of *Barfleur* shows her as she appeared when she first entered service, bearing a scheme designed for service with the Home Fleet. By the time she reached the Pacific she had been repainted in an overall mid-grey, with a darker box outlining her lower hull.

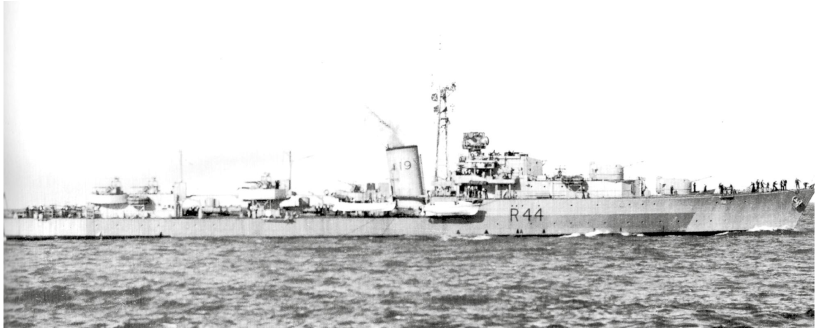
2: HMS *CAVALIER* (R73/D73), 1945

In design terms, the Ca-batch destroyer *Cavalier* – one of the eight C-class destroyers in her batch – was similar to the U-, V-, W- & Z-class destroyers that preceded her, and even the Ch, Co and Cr batches that followed. However, her uniqueness lies in the fact that of these 64 destroyers, *Cavalier* is the only one that remains, preserved as a museum ship. She joined the Home Fleet in late 1944, and saw active service off Norway, both in offensive operations and while providing cover for one of the last of the Arctic convoys. In May 1945 damage incurred by a friendly torpedo led to her seeing out the last months of the war in a shipyard. However, she did eventually see action in the Pacific, while helping to mop up Japanese detachments in the East Indies, which had refused to surrender. This depiction shows her as she looked in early 1945, while protecting Convoy RA64. She is painted in a late war Home Fleet camouflage scheme of green and blue-grey panels over a white base, designed for use in Arctic waters.

Battle-class (1942) destroyers

In 1942, the Admiralty proposed to build five destroyer flotillas, three of which would be War Standard destroyers, and two more of a powerful new design of fleet destroyer, developed in response to early war losses from enemy aircraft. The three War Standard flotillas became the three last batches of the C class, while the new fleet destroyers formed a new group, known as the Battle class (1942).

The following year three more flotillas of Battles were ordered, becoming the Battle class (1943). Two of these later flotillas were cancelled before completion, while the remaining flotilla entered service more than a year after the end of the war. So, only the 1942 group saw wartime service. Even here, of the 16 destroyers of the Battle class (1942), only five destroyers were commissioned before the end of hostilities. Of these, four entered service during the final weeks of the war, and so were still ‘working up’ when Japan surrendered. Only *Barfleur*, commissioned in September 1944, saw any real wartime service.

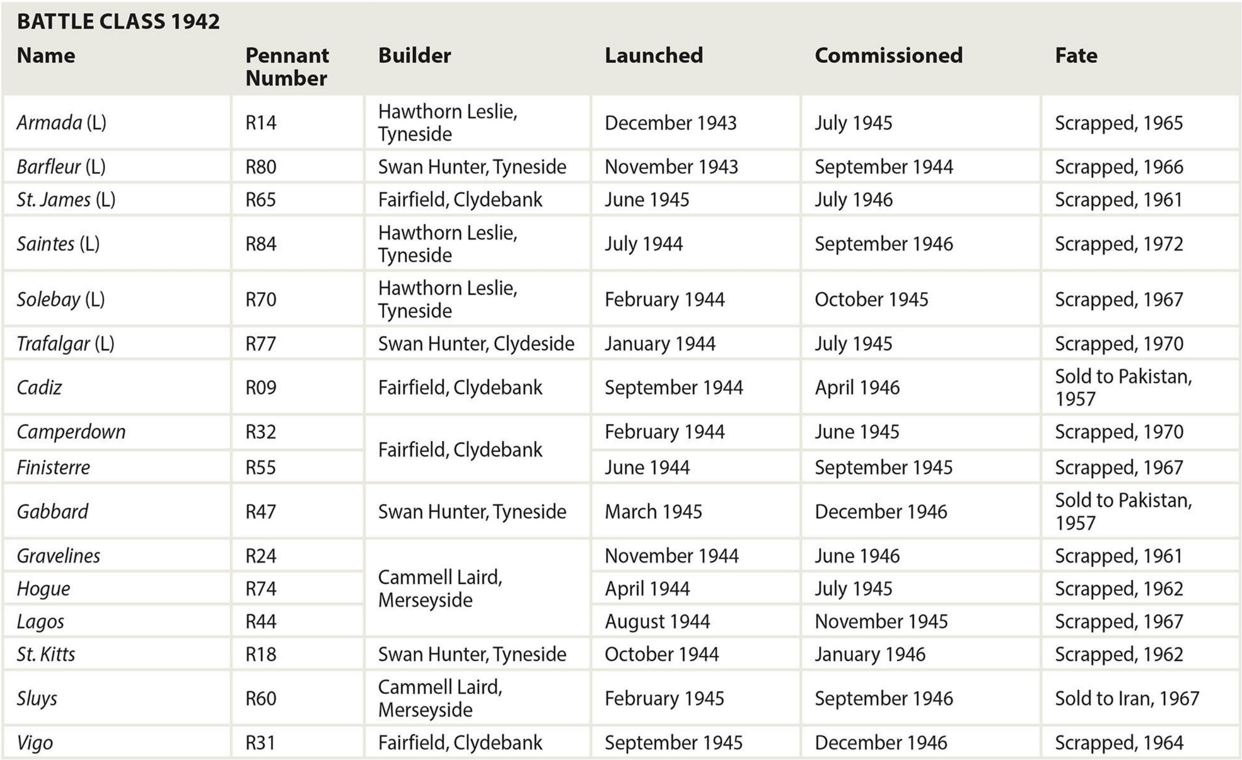


Although first laid down in 1942, the Battle class began entering service only during the last months of the war. HMS *Lagos*, pictured here shortly after entering service in November 1945, was one of the nine ships of her class commissioned after the end of hostilities.

The premise behind their design was the need for destroyers with an improved AA capability, involving not just close-range weaponry but dual-purpose main guns as well. So, the 4.5in QF gun Mark III was used, mounted in two twin turrets. This was a true dual-purpose weapon, with an elevation of 80 degrees, mounted in a power-operated fully enclosed turret. These guns were capable of automatic radar control, unlike the single 4in HA gun Mark III mounted on the centreline abaft the funnel, which was therefore relegated to little more than a starshell projector.

The two twin 4.5in turrets were mounted forward, in ‘A’ and ‘B’ positions, as farther aft the superstructure gun positions were occupied by close-range AA weaponry. Four Hazemeyer twin Bofors were mounted in echelon on the after superstructure, while two more were carried abreast of each other on an enlarged searchlight platform. These Bofors were also capable of radar control, which arguably made *Barfleur* the most efficient British AA destroyer of the war. Two twin Oerlikons and two single Oerlikons on the bridge wings completed this powerful array of AA guns. These ships carried Asdic and 70 depth charges each, and, unlike their C-class predecessors, these were also fitted with two quadruple torpedo launchers.

The designers made these ships slightly longer and broader than the War Standard destroyers and consequently they had a deeper draught. This was in order to absorb the extra top-weight created by the sensors, fire control equipment and weaponry. Just as importantly, the propulsion system represented a new departure, in that more efficient boilers were fitted, capable of generating more steam pressure. This meant that, despite the extra length and weight, these ships generated sufficient power to maintain almost the same speed as earlier destroyer classes. The Battle class proved an excellent design, and despite having just four main guns their fire control systems set new standards for destroyer gunnery. Arguably, this made them the best all-round British destroyers of the war, even though all but one of them arrived too late to fight.



BATTLE CLASS 1942

Name	Pennant Number	Builder	Launched	Commissioned	Fate
Armada (L)	R14	Hawthorn Leslie, Tyneside	December 1943	July 1945	Scrapped, 1965
Barfleur (L)	R80	Swan Hunter, Tyneside	November 1943	September 1944	Scrapped, 1966
St. James (L)	R65	Fairfield, Clydebank	June 1945	July 1946	Scrapped, 1961
Saintes (L)	R84	Hawthorn Leslie, Tyneside	July 1944	September 1946	Scrapped, 1972
Solebay (L)	R70	Hawthorn Leslie, Tyneside	February 1944	October 1945	Scrapped, 1967
Trafalgar (L)	R77	Swan Hunter, Clydeside	January 1944	July 1945	Scrapped, 1970
Cadiz	R09	Fairfield, Clydebank	September 1944	April 1946	Sold to Pakistan, 1957
Camperdown	R32	Fairfield, Clydebank	February 1944	June 1945	Scrapped, 1970
Finisterre	R55		June 1944	September 1945	Scrapped, 1967
Gabbard	R47	Swan Hunter, Tyneside	March 1945	December 1946	Sold to Pakistan, 1957
Gravelines	R24	Cammell Laird, Merseyside	November 1944	June 1946	Scrapped, 1961
Hogue	R74		April 1944	July 1945	Scrapped, 1962
Lagos	R44		August 1944	November 1945	Scrapped, 1967
St. Kitts	R18	Swan Hunter, Tyneside	October 1944	January 1946	Scrapped, 1962
Sluys	R60	Cammell Laird, Merseyside	February 1945	September 1946	Sold to Iran, 1967
Vigo	R31	Fairfield, Clydebank	September 1945	December 1946	Scrapped, 1964

Specifications	
Displacement:	2,315 tons (2,352 tonnes) standard
Dimensions:	Length overall: 379ft (115.5m); beam: 40ft 3in (12.2m); draught: 12ft 9in (3.9m) mean
Propulsion:	Two Admiralty boilers, two Parsons geared turbines, driving two shafts, and generating 50,000shp; maximum speed: 35¾ knots
Capacity:	766 tons (778 tonnes)
Range:	4,400nm at 20 knots
Armament:	Two twin 4.5in guns; one 4in AA gun; four twin 40mm Bofors, two twin and two single 20mm Oerlikons, eight 21in torpedoes in two quadruple launchers
Sensors:	Type 275, Type 276, Type 291, Type 293
Complement:	247 men (286 in leaders)

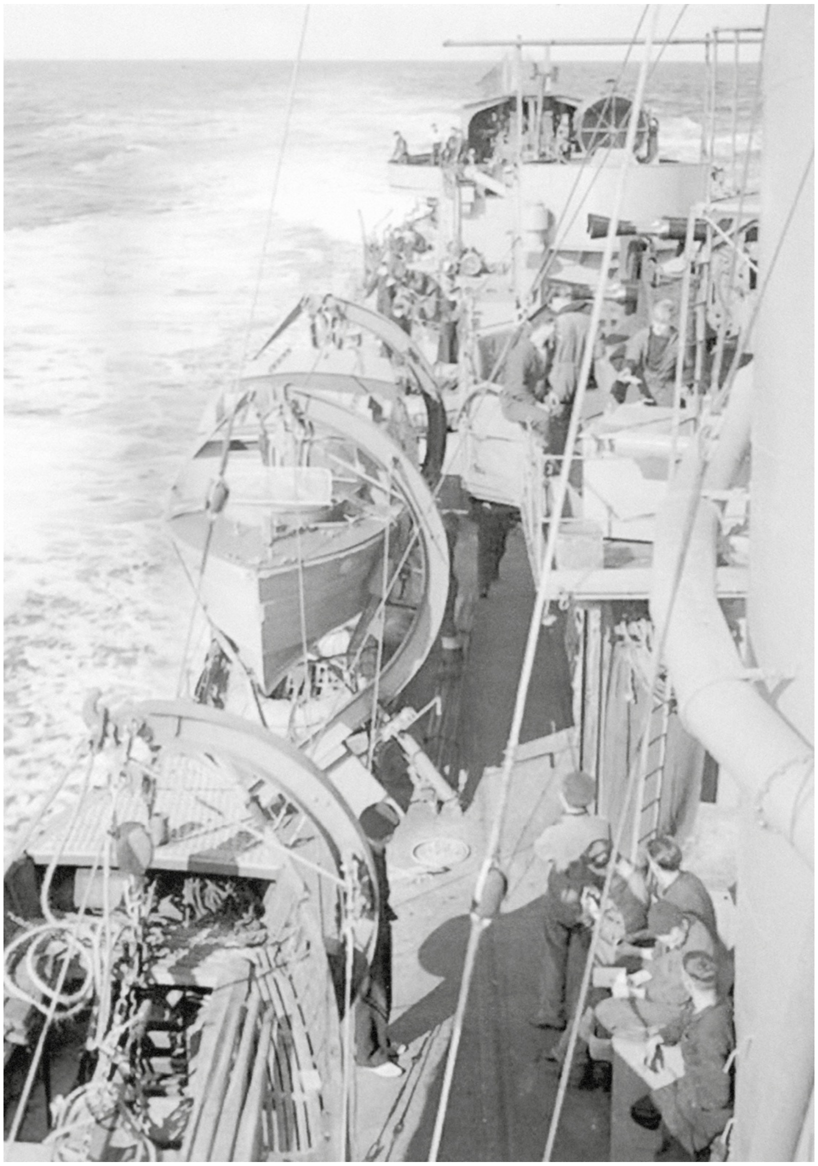
Wartime Modifications

No significant modifications were made during the war.

A DESTROYER IN ACTION

Even a sample of the various actions fought by the destroyers covered in this book could fill a dozen volumes. So, rather than describing these with a broad brush, we shall follow one destroyer in action, but in enough detail to capture something of what the battle was like for her and her crew.

On the night of 15–16 May 1945, HMS *Saumarez* and four U- & V-class destroyers took part in the battle of the Malacca Strait (see plate G, opposite), an engagement which pitted her against the Japanese heavy cruiser *Haguro*, and an escorting destroyer, the *Kamikaze*. It proved to be the last significant surface action fought by the Royal Navy during the war, fought using all the technological advantages of that stage of the war in terms of weaponry, fire control, information gathering and sensors. The result was an action described by Lord Mountbatten as ‘an outstanding example of a night attack by destroyers’. When intercepted signals revealed that this Japanese force was in the area, a Task Force from the British Eastern Fleet was sent to intercept. However, the Japanese learned of this and reversed course, heading back down the Malacca Strait towards Singapore. That night, all that stood in their way were the five destroyers of the 26th Flotilla, led by Captain Power in the flotilla leader *Saumarez*.



A typical scene of a destroyer under way, with the watch on deck mustered on the starboard side boat deck of HMS *Javelin*, while other hands can be seen next to the midships pom-pom, and around 'X' gun. Of note is the informal array of attire worn by the crew while at sea.

Radar contact was made at 10.40pm, at a range of 34 miles. Power deployed his force in a crescent, hoping to envelop the enemy cruiser. Visual contact was made at 1.05am, when *Venus* spotted the cruiser. An attempt to launch torpedoes was foiled as the launchers were not trained to the right arc. However, the *Haguro* feared a spread was heading towards her, and turned away. She was now steaming directly towards the *Saumarez*. The destroyer was heading north at around 25 knots – the *Haguro* heading south at 25, giving a closing speed of 50 knots. In the flotilla leader's cramped Operations Room, Power assessed the situation on the Plotting Table, before heading up to the open bridge, where he would stay for the remainder of the battle.

An officer, Lt Calnan, described the feeling on board: ‘The Ops. Room crew: silent, strained and apprehensive. The bridge crew much happier: out in the open where a man is braver, but still strained and jumpy.’ He added that the Captain in his white overalls, anti-flash hood and gloves appeared imperturbable, but was grinning at the prospect of battle. Others behaved differently. Calnan added: ‘I myself was just plain over-excited, but the others, terribly British and very brave, pretending to be unemotional, calm and faintly bored. I could not understand their attitude, then or now.’ A steady stream of reports reached the bridge from the Operations Room, as the range dropped rapidly. Then they spotted the enemy cruiser and destroyer, lit by flashes of lightning.

The torpedo crew of HMS *Venus*, pictured in Trincomalee (Sri Lanka) in 1945, after the battle of the Malacca Strait. During the engagement these men scored three torpedo hits on the Japanese heavy cruiser *Haguro*. The average age of the destroyer’s crew was just 24.

Kamikaze was dead ahead, and Power turned hard to starboard. The two destroyers passed each other at a few hundred yards. The Operations Room had been tracking her, and the 4.7in 'A' gun opened fire under radar control, but switched to visual aiming seconds later. They scored three hits. Meanwhile the twin Bofors opened up. Calnan described what happened: ‘The enemy destroyer appeared under our port bow, and as she passed close down our port side at more than 50 knots relative speed, the Bofors raked her from stem to stern.’ He added:

‘The shells streamed out in a hosepipe sweep, the tracers hitting along her whole length – no ricochets on this soft target.’ Badly damaged, *Kamikaze* lurched away into the darkness, and on the bridge of *Haguro* Admiral Hashimoto ordered her to break off and head for nearby Penang.

That still left *Haguro*, now with five destroyers approaching her from five different directions, like the points of a star. At 1.08am she fired a starshell which broke over *Saumerez*, bathing her in a bright white light. The destroyer’s crew could see *Haguro* clearly too. As Power put it; ‘She looked pretty big.’ Power suddenly realized that his torpedo tubes were trained to starboard, and the cruiser was now 4,000 yards off his port bow. It would take too long to train the tubes round. So Power decided to turn the ship instead, aiming the tubes, as he put it later, ‘like a shotgun’. *Saumarez* spun in a tight circle, and on the bridge the Torpedo Firing Officer (TFO) got ready.

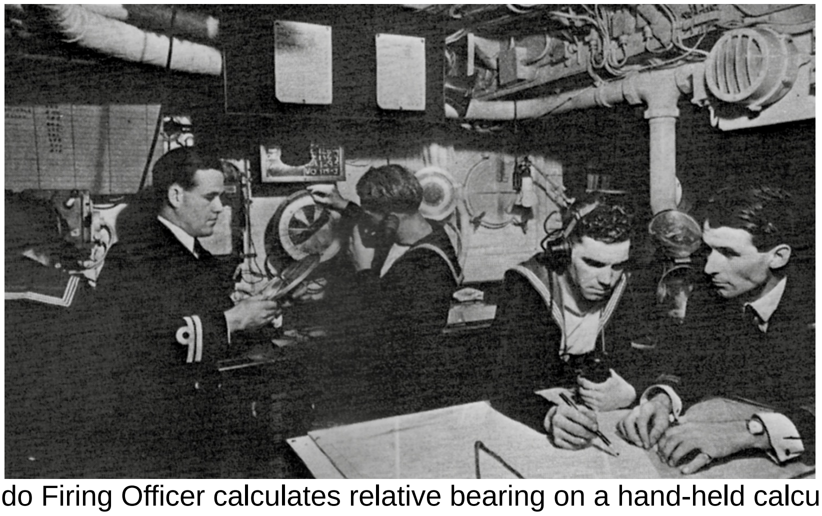
HMS *Virago*, pictured here off Newcastle, after her completion in November 1943. She went on to see action at the battle of North Cape (1943) and the Malacca Strait (1945), and participated in the sinking of both the *Scharnhorst* and the *Haguro*.

At that moment *Haguro* opened fire, and a near miss sent a torrent of water crashing down on the bridge. The TFO was temporarily stunned. Power recalled the moment: ‘Before he could come up for air it was obviously time to fire, and I ordered Fire One by eye from the binnacle. The rest were fired automatically by interval.’ The destroyer then kept turning, and made her escape behind a smokescreen. However, they were able to see the result. As Power put it, ‘The hits were very distinctive – three gold-coloured splashes like a Prince of Wales’ feathers, more than twice as high as her bridge. She didn’t fire any more.’

Actually, that was a little premature. At that moment a salvo of four 5in shells from *Haguro*’s starboard secondary battery fell on and around the escaping destroyer. Yet more water crashed over the destroyer, while one shell chopped off the top of her funnel, and another smashed through the hull into No. 1 Boiler

Room. The boiler was hit, and escaping steam scalded two men to death. Clouds of steam filled the lower decks, including the Operations Room. At the same moment the lights failed. As one crewman there recalled, ‘There was a moment of incredible silence – I just waited for the ship to blow up, steam arose, there were shouts, I think an emergency light came on – we couldn’t believe our luck.’ In fact, as the Navigating Officer put it, ‘Actually, owing to heroic work by the Engine Room staff, the ship had barely faltered in her stride.’

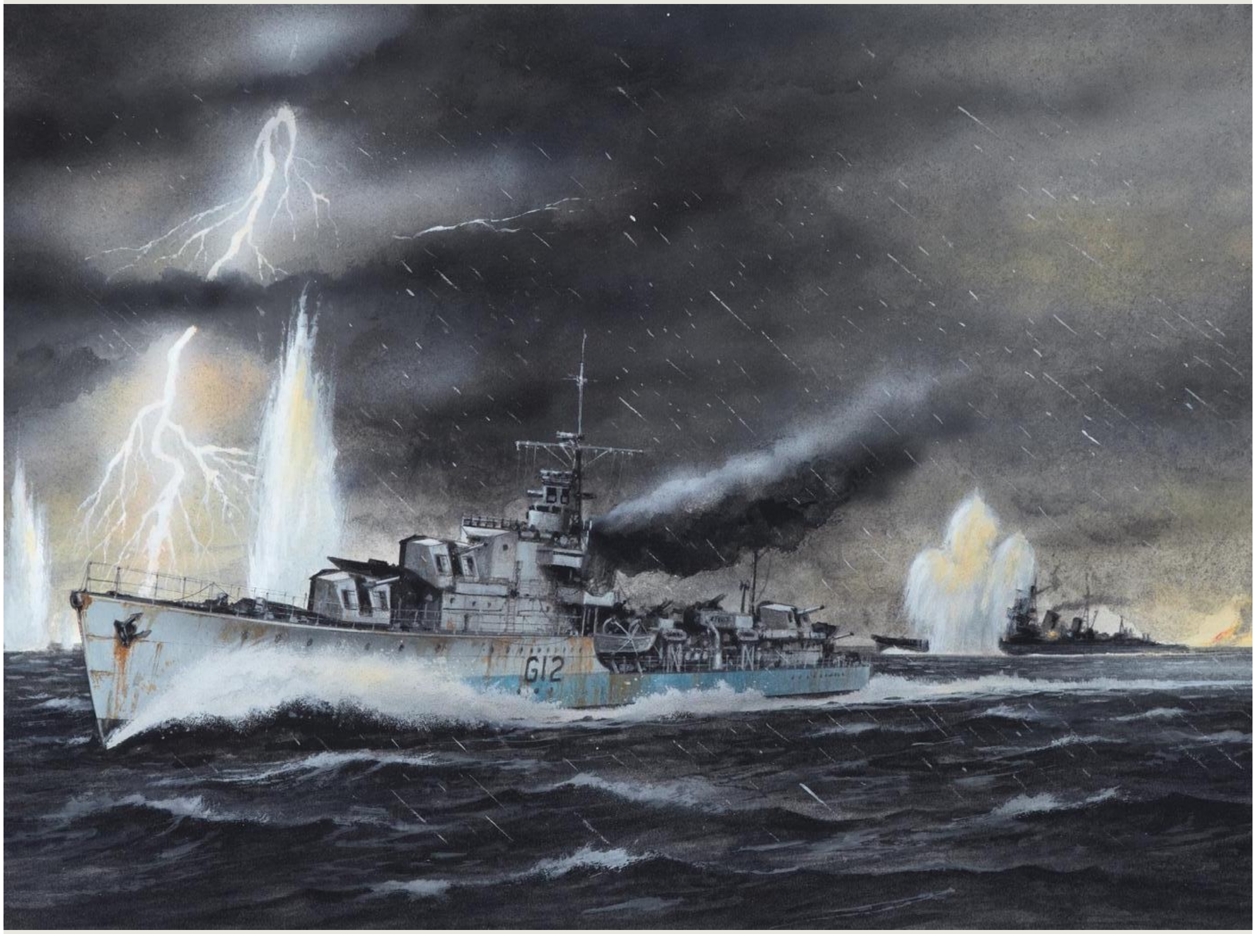
The three hits were scored at 1.15am – just ten minutes after the start of the action. *Haguro* lost her front three main turrets, and as electrical power failed her two rear turrets were reduced to firing rather ineffectually under local control. A 4.7in shell, fired from either *Saumarez* or *Verulam*, hit the bridge, killing the Admiral and badly wounding Captain Sugiura. As *Saumarez* sped away the other destroyers closed in on the stricken cruiser, which was now lying dead in the water. She was hit by more torpedoes, launched from three destroyers between 1.26 and 1.30am. Finally, a spread from *Vigilant* delivered the *coup de grâce*, and *Haguro* finally sank at 2.09am. Despite the intensity of the hard-fought action the flotilla got off relatively lightly. The only casualties were the two dead and three wounded from *Saumarez’* boiler room.



Here the Torpedo Firing Officer calculates relative bearing on a hand-held calculator, while two ratings maintain contact with the torpedo mounts and the bridge. In the foreground the Plotting Officer and his assistant record the tracks of both the destroyer and its target.

G HMS *SAUMAREZ* (G12) AT THE BATTLE

OF THE MALACCA STRAIT, 1945



On 14 May 1945, the Japanese heavy cruiser *Haguro* and the destroyer *Kamikaze* were sent from Singapore to the Adaman Islands, to evacuate part of the Japanese garrison there. Having learned of the venture, a British task force was sent to intercept the Japanese ships. After an air attack the Japanese reversed course, as they rightly suspected a large British force was closing in. However, their escape route through the Malacca Strait was barred by the 26th Destroyer Flotilla. In the flotilla leader *Saumarez*, Captain Power ordered his five destroyers to form a crescent, and used radar to guide his ships into position through the darkness and intermittent rain squalls. Then, shortly after 1am on 19 May, the destroyer *Venus* spotted the *Haguro*.

Venus failed to launch her torpedoes in time, and *Haguro* turned away to the south. This brought her deeper into Power's trap. The first victim was the *Kamikaze*, which was riddled by fire from *Saumarez*, and limped away, breaking off the action. Then it was the turn of the *Haguro*. She and the destroyers exchanged fire, and *Saumarez* was hit. However, she and *Verulam* launched their torpedoes at the cruiser, and at 1.15am they scored three hits. Within the next 15 minutes the cruiser was hit three more times by torpedoes from *Virago* and *Vigilant*. She was now dead in the water, and at 2.06am she was finished off by three torpedoes launched by *Vigilant* and *Venus*.

This plate shows *Saumarez* making her escape after launching her torpedoes. The destroyer sports the colour scheme used by the East Indies Fleet. She carried eight 21in torpedoes, in two quadruple launchers, and all of them were launched at a range of approximately 2 nautical miles. At that distance the running time was 200 seconds. After launching its spread the destroyer swung away slightly, but kept firing at the cruiser with her 4.7in guns until the torpedoes struck home.

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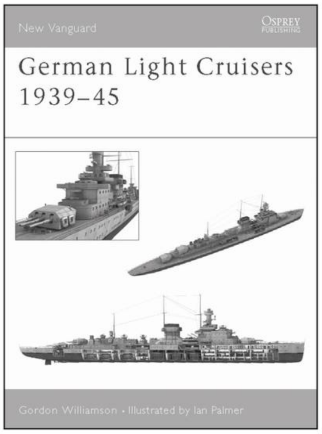
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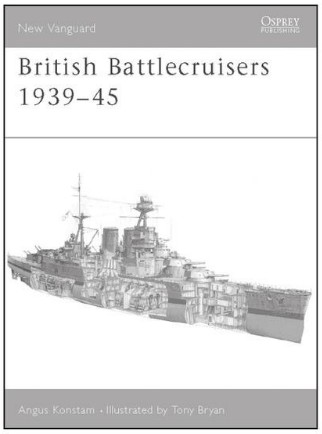
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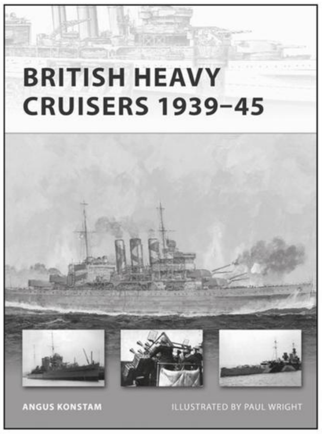
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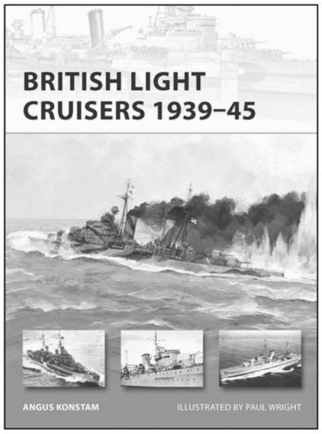
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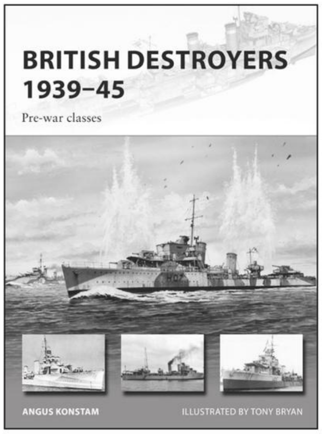
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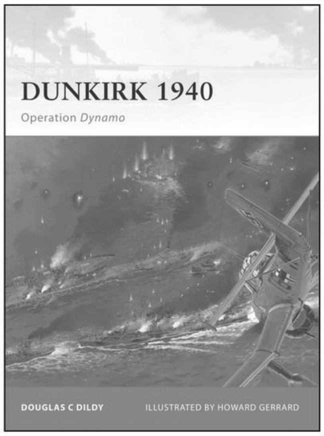
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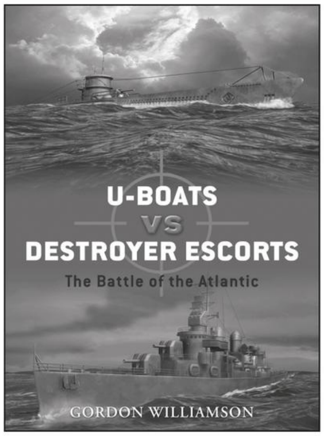
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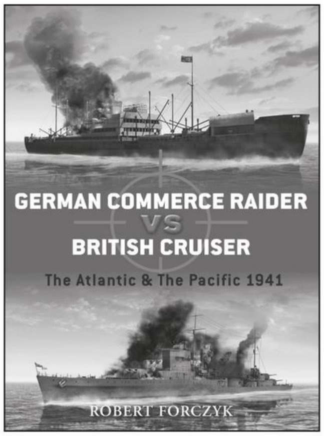
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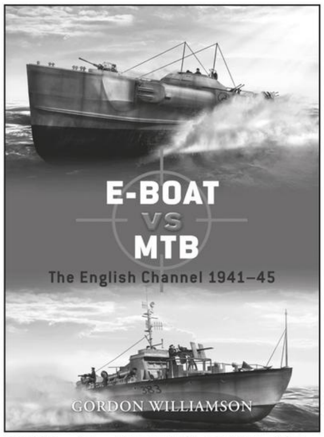
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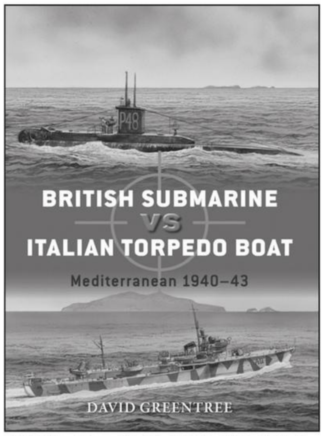
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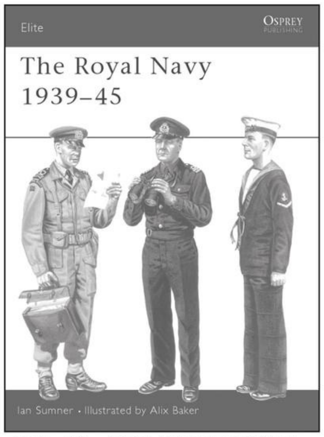
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